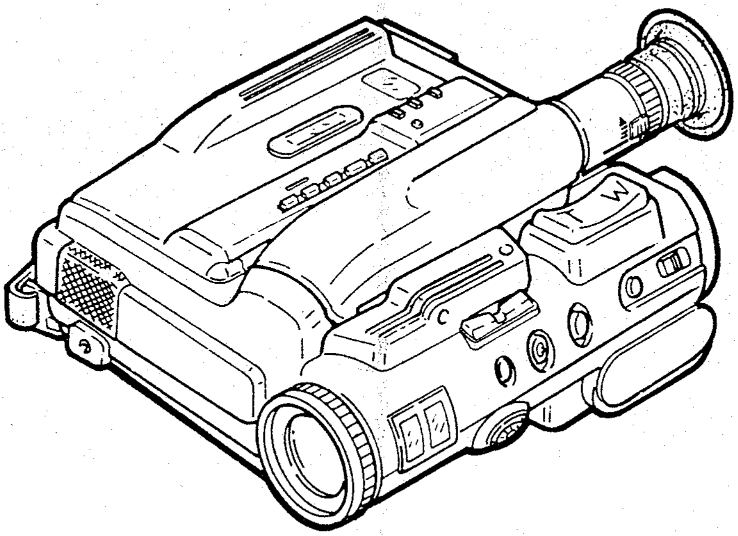
SANYO

Service Manual 8 mm Camcorder VM-ES88P



Specifications

Television system	PAL, CCIR
Video recording system	Rotating 4-head helical-scan FM. color under system
Audio recording system	Rotating head FM system
Cassette type	8 mm video tape cassette
Tape speed	SP: 20.051 mm/sec. LP: 10.025 mm/sec.
Recording/ playback time	180 minutes (P5-90 cassette)
Fast forward/ rewind time	Approx. 8 minutes (P5-90 cassette)
Pickup element	CCD solid-state type
Viewfinder	Electronic (0.7 inch type, black and white)
Lens	Electro-powered 6:1 zoom lens f = 11 mm ~ 66 mm F2 Close-up function (15 mm ~ 1.2 m) Automatic focus Filter diameter 37 mm
White balance adjustment	Automatic
Minimum subject lighting	5 lux
Subject lighting range	5 lux ~ 100.000 lux
Power supply voltage	Battery holder input 6V/7.5V/9V
Power consumption	5.9W during camera recording
Operation temperature range	0°C ~ 40°C (32°F ~ 104°F)
Storage temperature range	− 20°C ~ 60°C (− 4°F ~ 140°F)
External dimensions	163 × 78 × 184 mm (W × H × D)
Weight (approximately, not including battery pack and cassette):	810g
Microphone	Electret condenser type (omnidirectional)
AUDIO/VIDEO terminal	Video input 1 Vp-p. 75Ω unbalanced, negative sync Audio output − 6 dBs, 2.2kΩ or less
Microphone jack	Mini jack, − 66 dBs For low-impedance microphone
Earphone jack	Mini jack, for 8Ω earphone

• Specifications and external appearance are subject to change without notice.

PRODUCTION CODE No.
126 018 29 (G)
126 018 06 (SW)
126 018 09 (SP)
126 018 19 (E)
126 018 07 (I)
126 018 23 (A)
126 018 10 (ME)

ES4P/G, SW, SP, E, I, A, ME

REFERENCE NO. WM-550097

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1. DISASSEMBLY

1-1. REMOVAL OF THE CABINET AND VIEWFINDER

Note:

- Many flexible wiring boards (FPC) are used in this unit.
  Take care that the wiring patterns in the FPC cut when bending the FPC and pressing strongly against the corner of the boards.
- Use the socket pull-out tool (VJ8-0030:See the table of camera adjustment servicing tools) as possible when removing the connector. And slip off or on the connector vertically against the boards.

1) Lift up the viewfinder.
2) Open the cassette cover with pressing the cassette cover switch ① in the direction of arrow Ⓐ.
3) Next remove the screw ②, five screws ③ and two screws ④ fixing the upper cabinet.
4) Slide the built-in microphone (See page 5) about 3 mm in the direction of arrow Ⓑ and remove the upper cabinet.
   Note: At this time, take care that three connectors ⑤ are connected.
5) Remove three connectors ⑤.
6) Remove the recording start/stop button ⑥.
7) Remove two screws ⑦ fixing the viewfinder.
8) Remove the viewfinder.

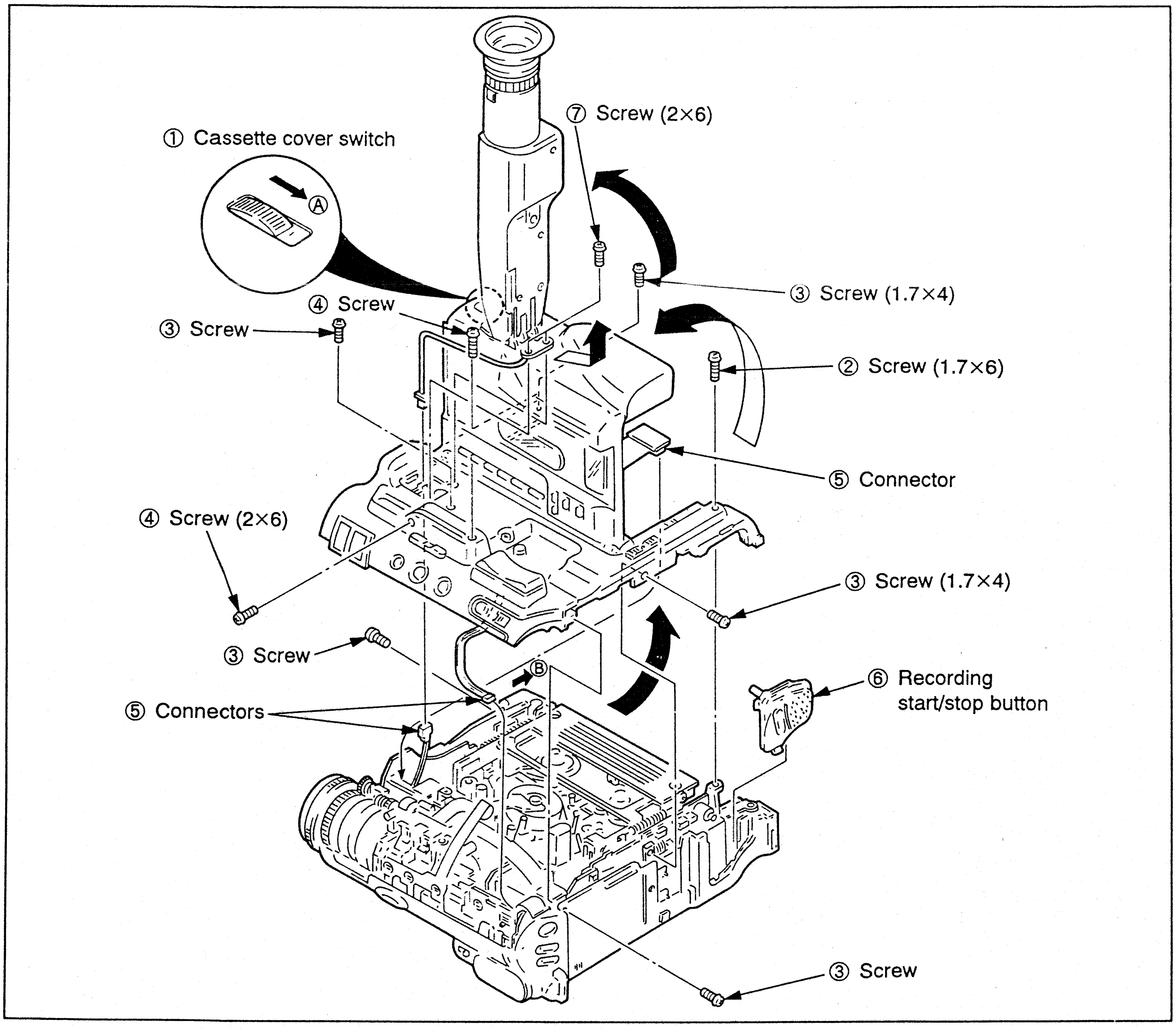

⑦ Screw (2×6)
① Cassette cover switch
Ⓐ
③ Screw (1.7×4)
④ Screw
③ Screw
② Screw (1.7×6)
⑤ Connector
④ Screw (2×6)
③ Screw (1.7×4)
③ Screw
Ⓑ
⑥ Recording start/stop button
⑤ Connectors
③ Screw

Fig. 1-1.

1-2. REMOVAL OF CASSETTE COVER

1) Remove the washer ①.
2) Remove two screws ② fixing the cassette cover.
3) Remove the hinge ③ and the pin ④.
4) Remove the cassette cover ⑤ from the upper cabinet.
5) Remove three screws ⑥, two screws ⑦, and two screws ⑧ fixing the reverse side of the cassette cover ⑤.
6) Remove three hooks ⑨ and separate the upper cover from the under cover of the cassette cover.
7) Remove the LCD section of the cassette cover.
8) Remove the zoom button ⑩ from the upper cabinet like closing its claws in the direction of arrow Ⓐ.

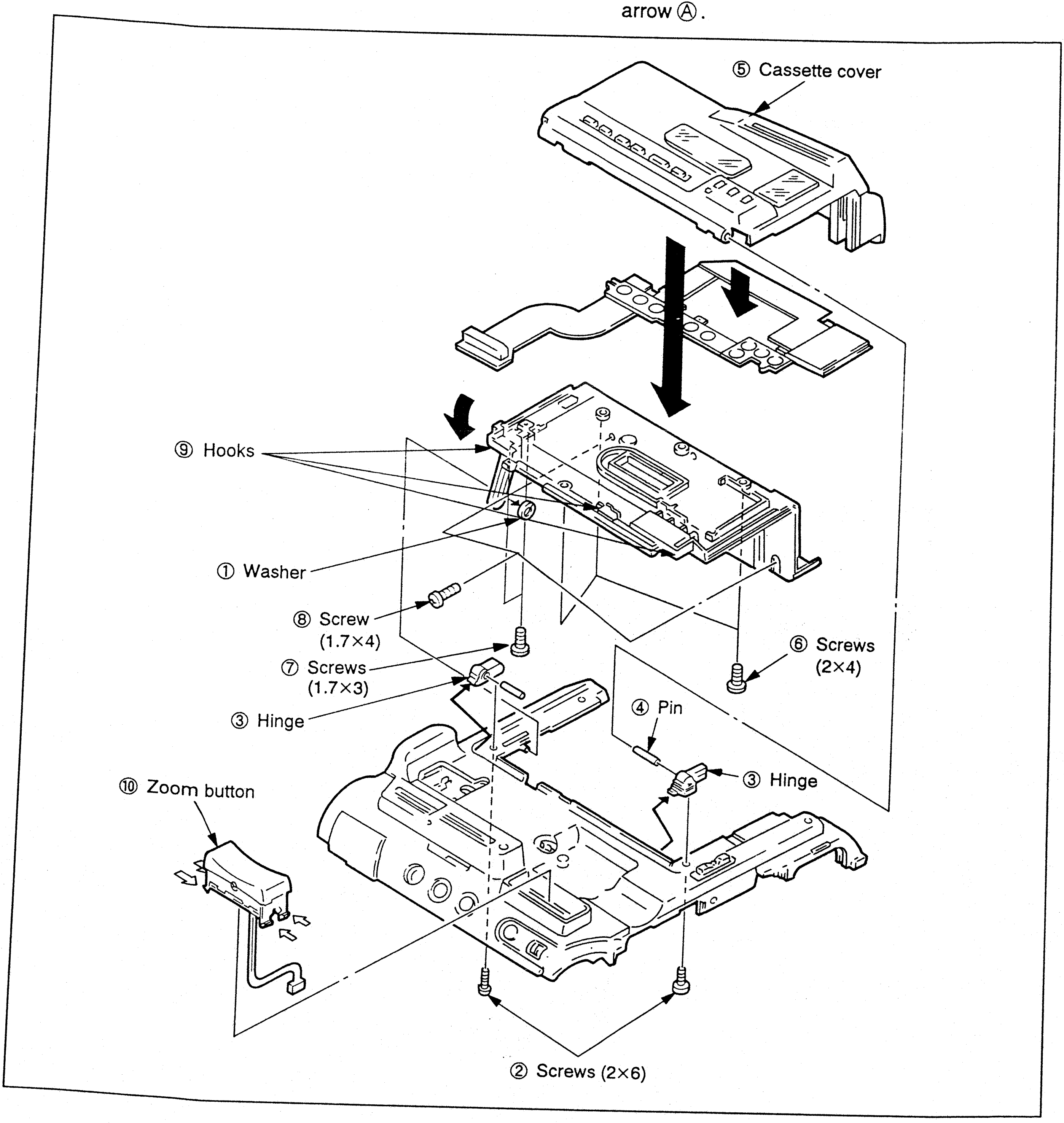

⑤ Cassette cover
⑨ Hooks
① Washer
⑧ Screw
(1.7×4)
⑦ Screws
(1.7×3)
③ Hinge
⑥ Screws
(2×4)
④ Pin
③ Hinge
⑩ Zoom button
② Screws (2×6)

Fig. 1-2.

1-3. REMOVAL OF VIEWFINDER

1) Pull out the eyecup block ① of the viewfinder in the direction of arrow Ⓐ to the setting mark ②.
2) Remove by turning the eyecup block ① of the viewfinder about 20 ° in the direction of arrow Ⓑ.
3) Remove two screws ③ and remove the upper cabinet of the viewfinder.
4) Remove the connector ④ and separate the viewfinder board section.

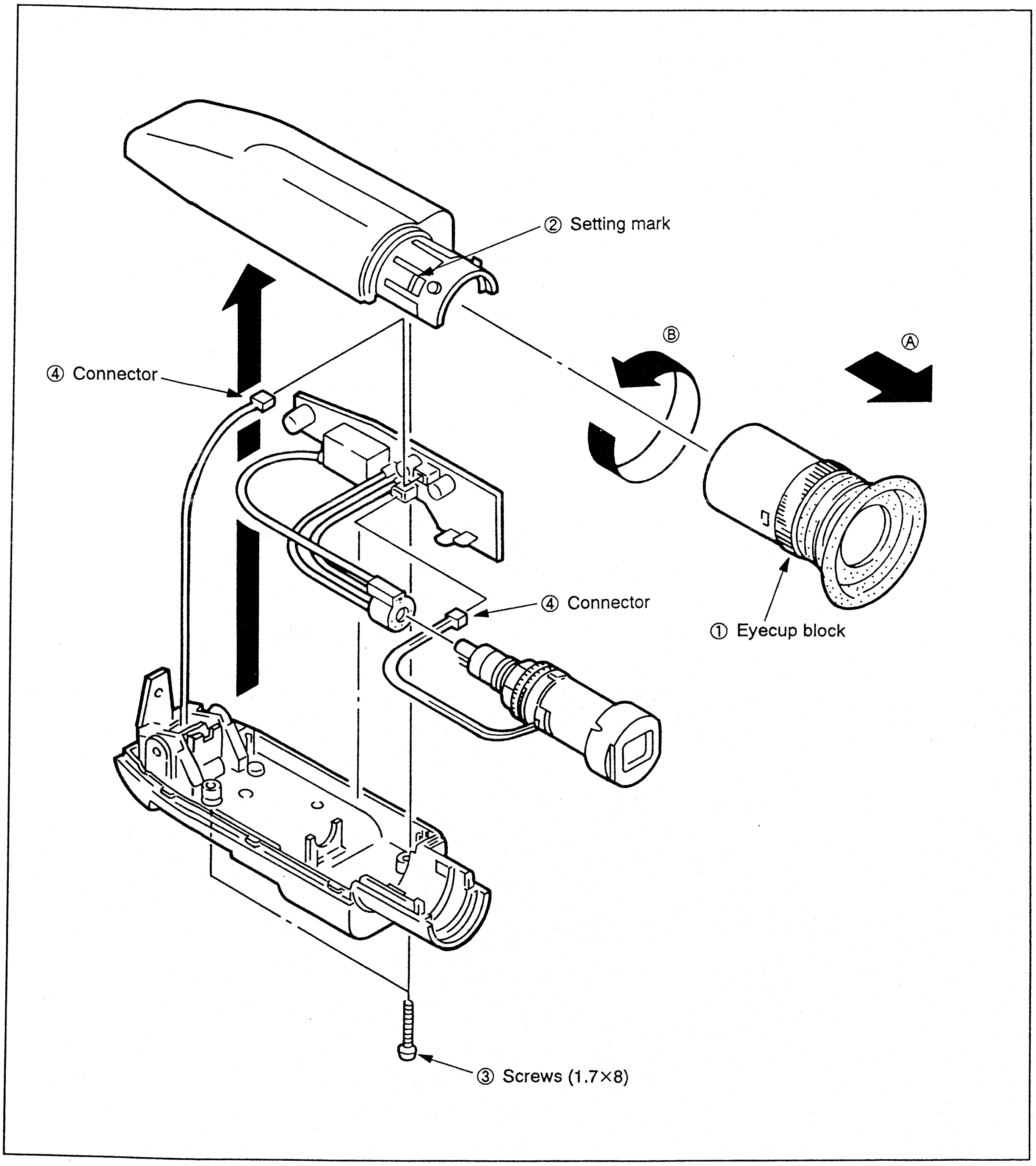

② Setting mark
Ⓑ
Ⓐ
④ Connector
④ Connector
① Eyecup block
③ Screws (1.7×8)

Fig. 1-3.

1-4. REMOVAL OF CAMERA BLOCK AND BUILT-IN MICROPHONE (See Fig. 1-4 ⓐ.)

1) Remove three screws ① and the screw ② fixing the camera block.
2) Remove the connector ③ with holding the board section of the connector and remove the camera block ④.

   Note: At this time, take care that the connector ⑤ is connected under the camera block ④.
3) Remove the connector ⑤ and separate the camera block from the unit.
4) Separate the built-in microphone from the unit.

1-4-1. Removal of camera block board (See Fig. 1-4 ⓑ.)

1) Remove the FPC ② mounted on the shield case of the CA1 board ①.
2) Remove two screws ③ and the connector ④, and remove the TC1 board ⑤.
3) Remove two screws ⑥ and the bracket ⑦, and remove the CA1 board ①.
4) Separate the CA3 board ⑧ from the CA1 board ①.
5) Remove two screws ⑨ and separate the CA2 board ⑩, the filter ⑪, and the device folder ⑫ individually.

1-4-2. Removal of built-in microphone (See Fig. 1-4 ⓒ.)

1) Remove two screws ① and remove the bracket D ②, the screen D ③, the AD board ④ and the insulator ⑤.
2) Remove the built-in microphone ⑥.

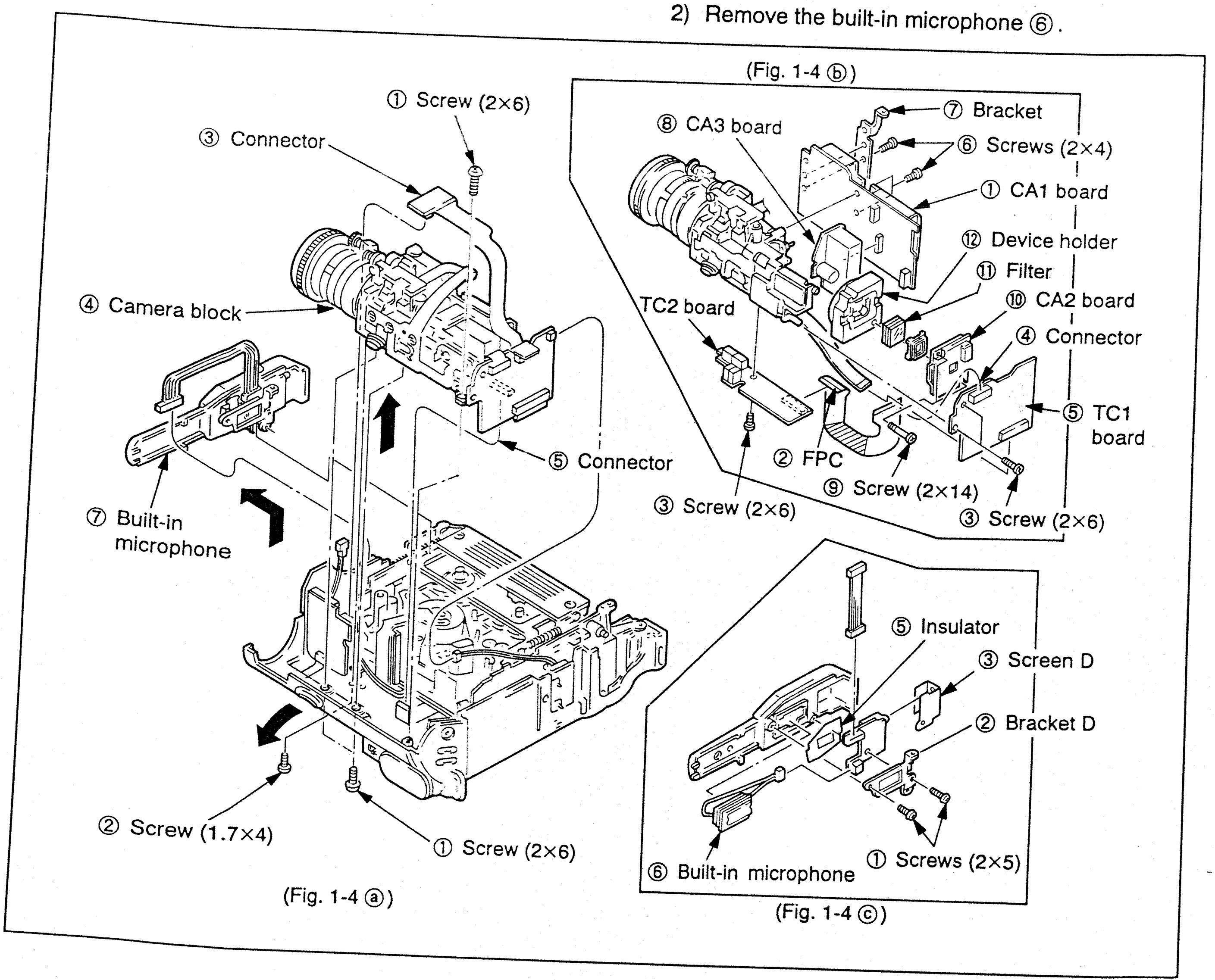

① Screw (2×6)
③ Connector
④ Camera block
⑤ Connector
⑦ Built-in microphone
② Screw (1.7×4)
① Screw (2×6)
(Fig. 1-4 ⓐ)
(Fig. 1-4 ⓑ)
⑦ Bracket
⑧ CA3 board
⑥ Screws (2×4)
① CA1 board
⑫ Device holder
⑪ Filter
⑩ CA2 board
TC2 board
④ Connector
⑤ TC1 board
② FPC
⑨ Screw (2×14)
③ Screw (2×6)
③ Screw (2×6)
⑤ Insulator
③ Screen D
② Bracket D
⑥ Built-in microphone
① Screws (2×5)
(Fig. 1-4 ⓒ)

Fig. 1-4.

1-5. REMOVAL OF MECHANISM BLOCK

1) Remove the connector ② connected to the battery connector unit ① and remove the battery connector unit ①.
2) Remove two screws ③ and remove the cover ④.
3) Remove three screws ⑤ and the blind ⑥.
4) Remove four screws ⑦, remove the connector ⑧ and separate the mechanism block from the lower cabinet.
5) Remove the AV terminal cover ⑨, remove two screws ⑩ and remove the AV terminal.
6) Remove the screw ⑪ and remove the hinge button ⑫ and the F-PCB ⑬.

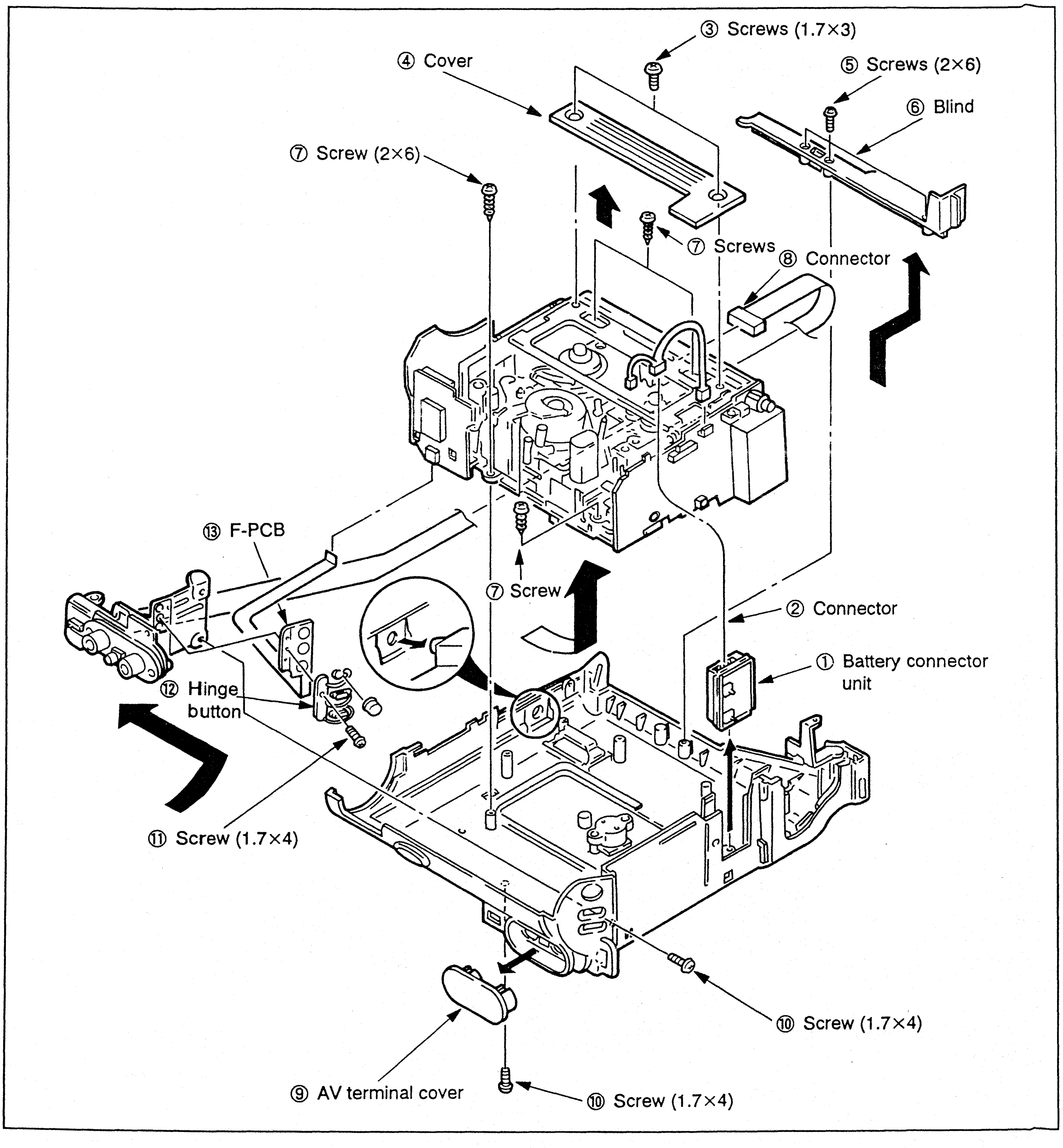
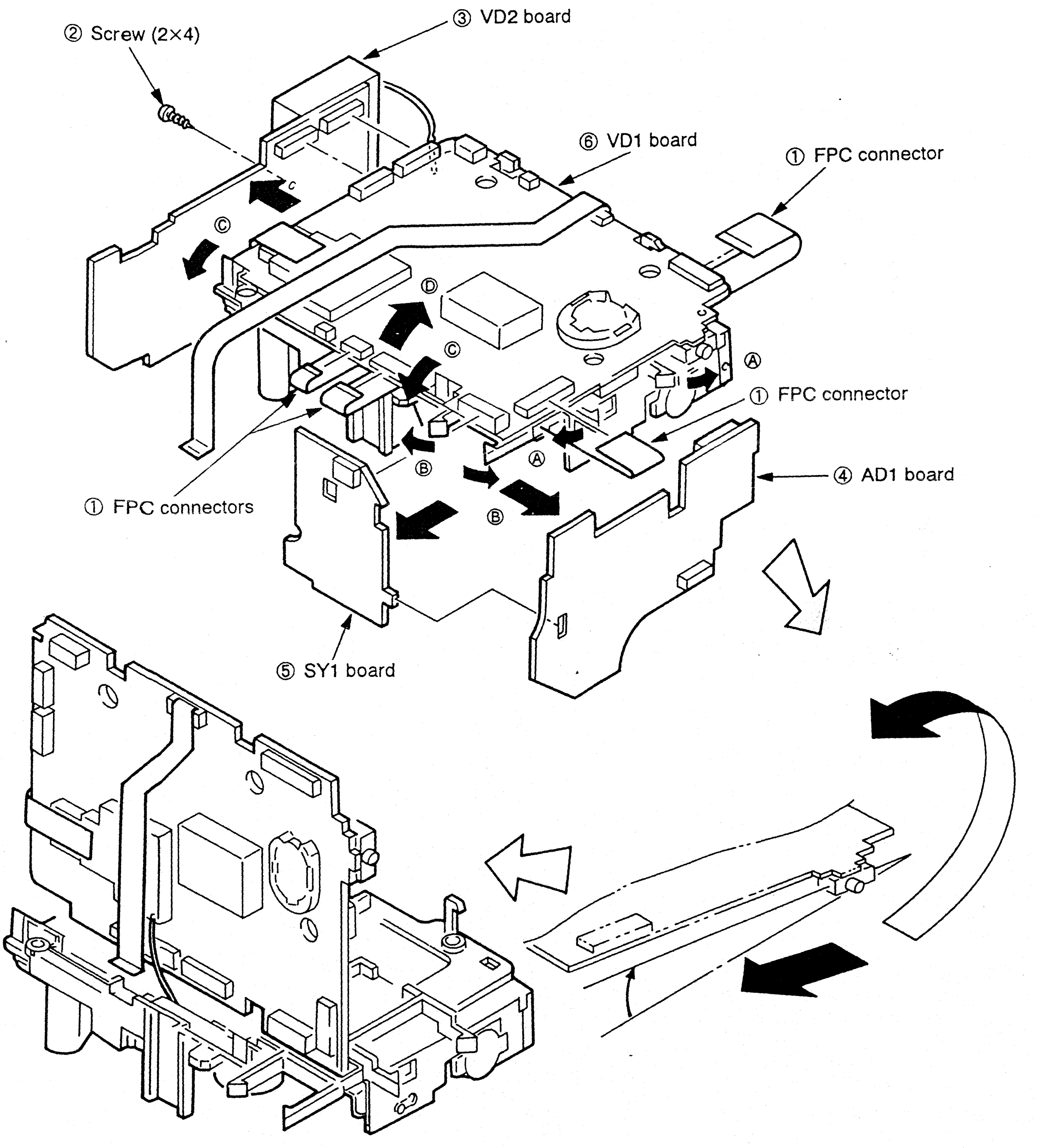

③ Screws (1.7×3)
④ Cover
⑤ Screws (2×6)
⑥ Blind
⑦ Screw (2×6)
⑦ Screws
⑧ Connector
⑬ F-PCB
⑦ Screw
② Connector
① Battery connector unit
⑫ Hinge button
⑪ Screw (1.7×4)
⑩ Screw (1.7×4)
⑨ AV terminal cover
⑩ Screw (1.7×4)

Fig. 1-5.

1-6. REMOVAL OF BOARD

1) Remove four FPC connectors ①.
2) Remove the screw ② and remove the VD2 board ③.
3) Open the claw in the direction of arrow Ⓐ and remove the AD1 board ④.
4) Open the claw in the direction of arrow Ⓑ and remove the SY1 board ⑤.
5) Open the claw in the direction of arrow Ⓒ and remove setting up the VD1 board ⑥.

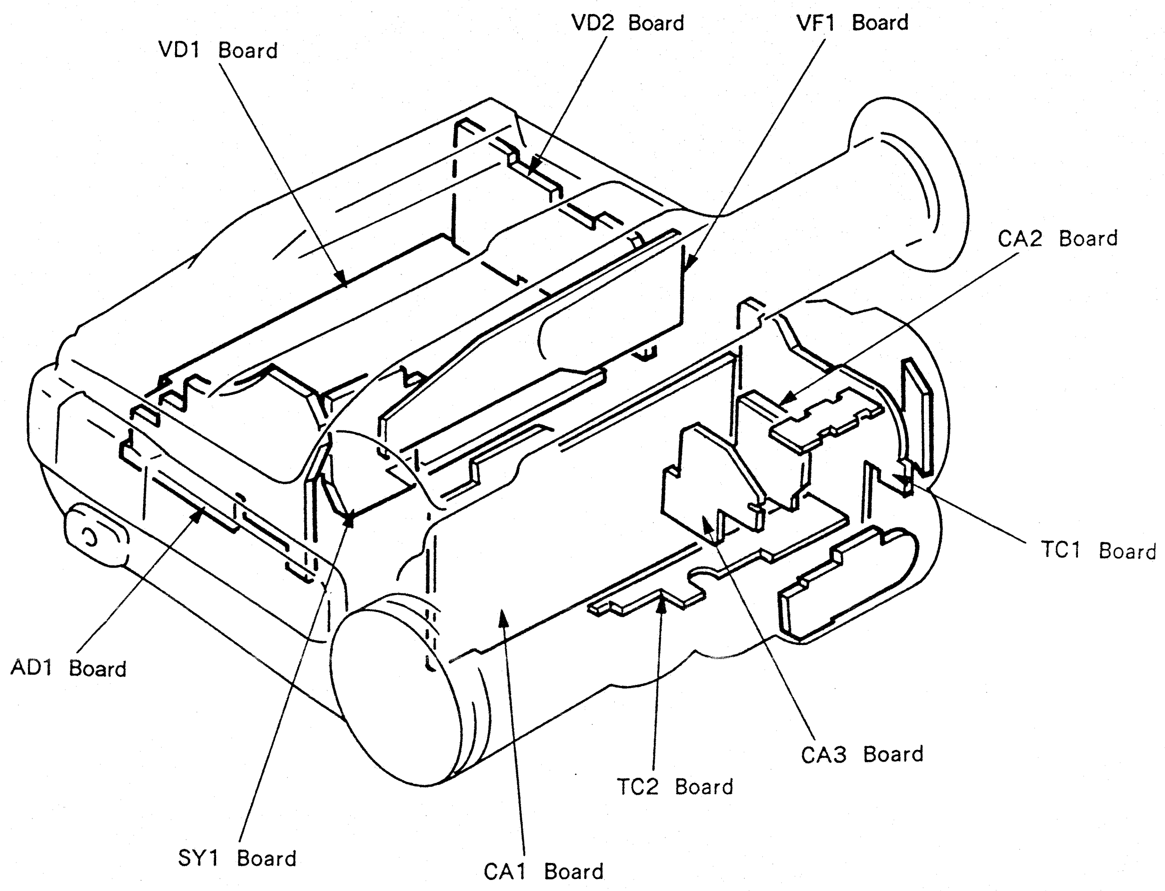


② Screw (2×4)
③ VD2 board
⑥ VD1 board
① FPC connector
Ⓒ
Ⓓ
Ⓒ
Ⓐ
① FPC connector
Ⓑ
Ⓐ
Ⓑ
④ AD1 board
① FPC connectors
⑤ SY1 board

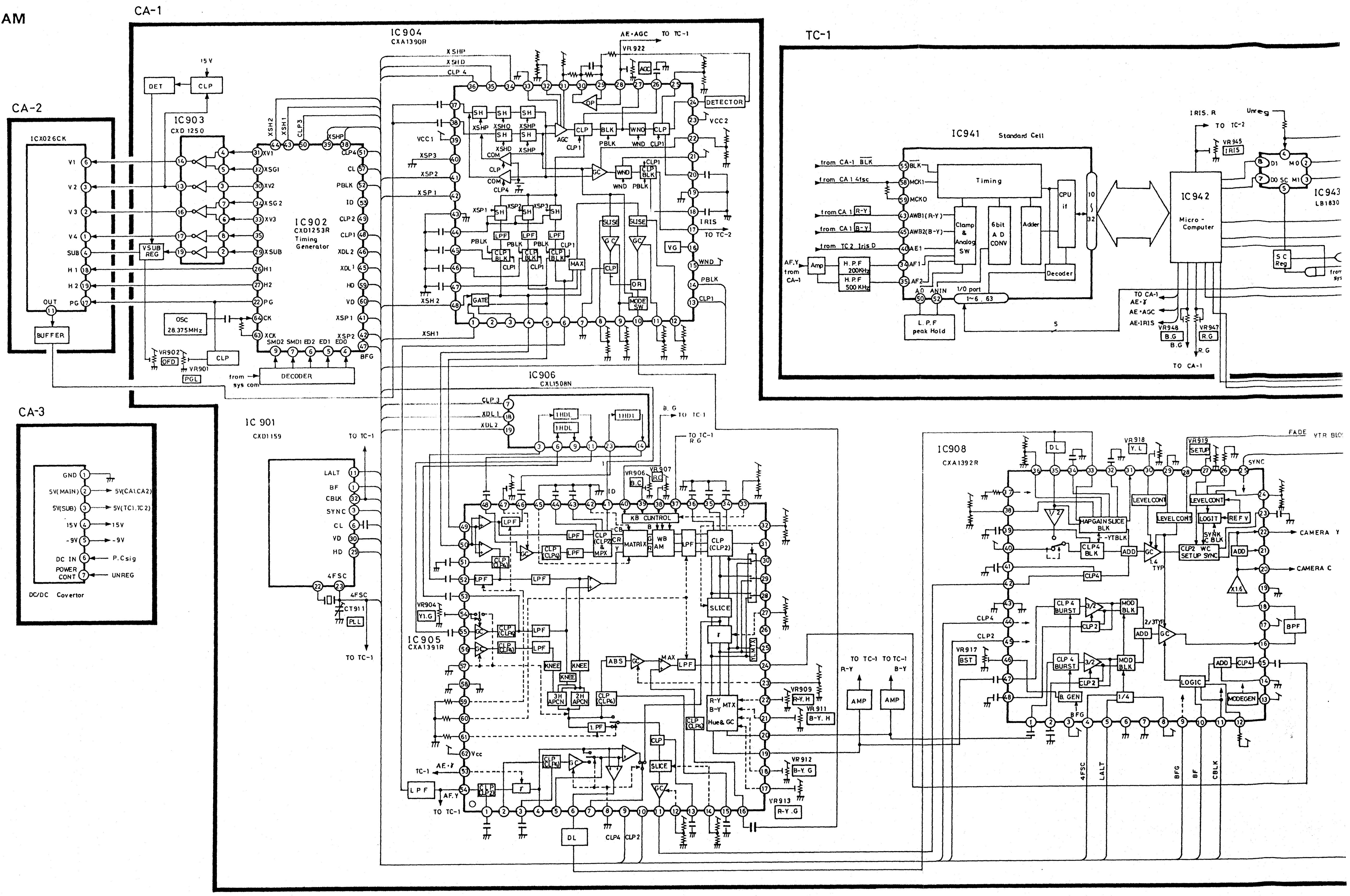
Fig. 1-6.

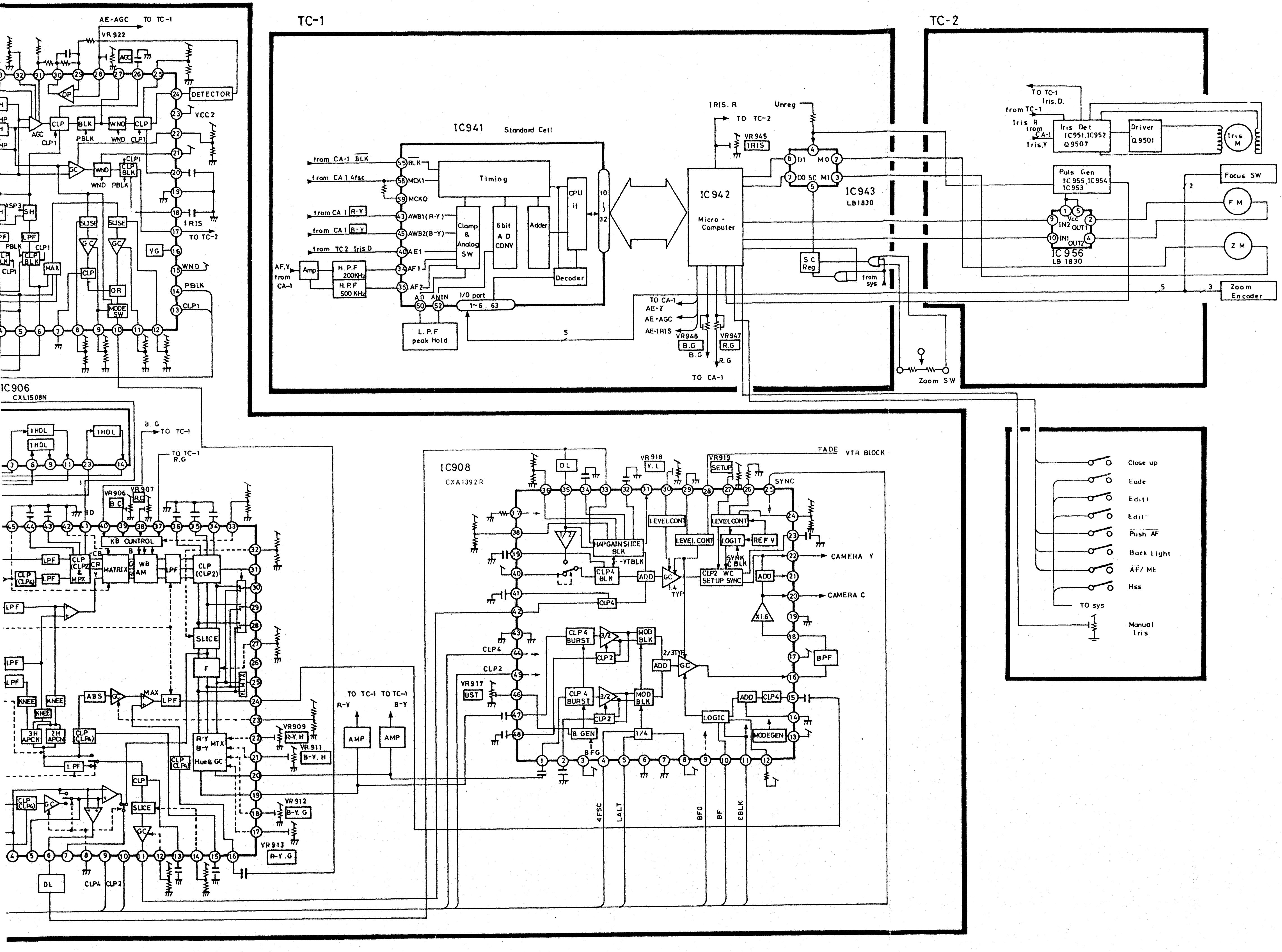
2. BLOCK DIAGRAM

2-1. BOARD LOCATION

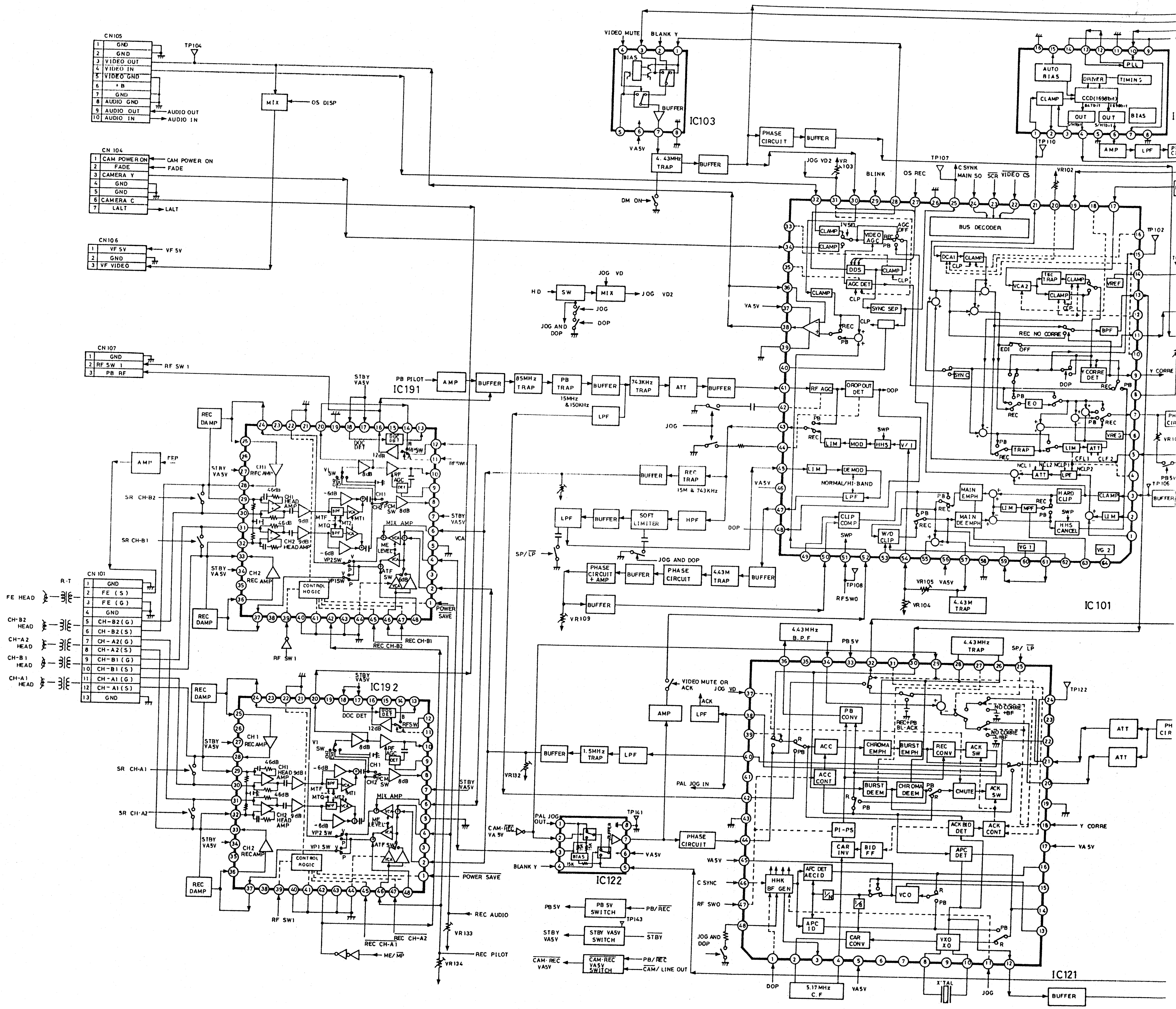

VD2 Board
VF1 Board
VD1 Board
CA2 Board
TC1 Board
AD1 Board
CA3 Board
TC2 Board
SY1 Board
CA1 Board

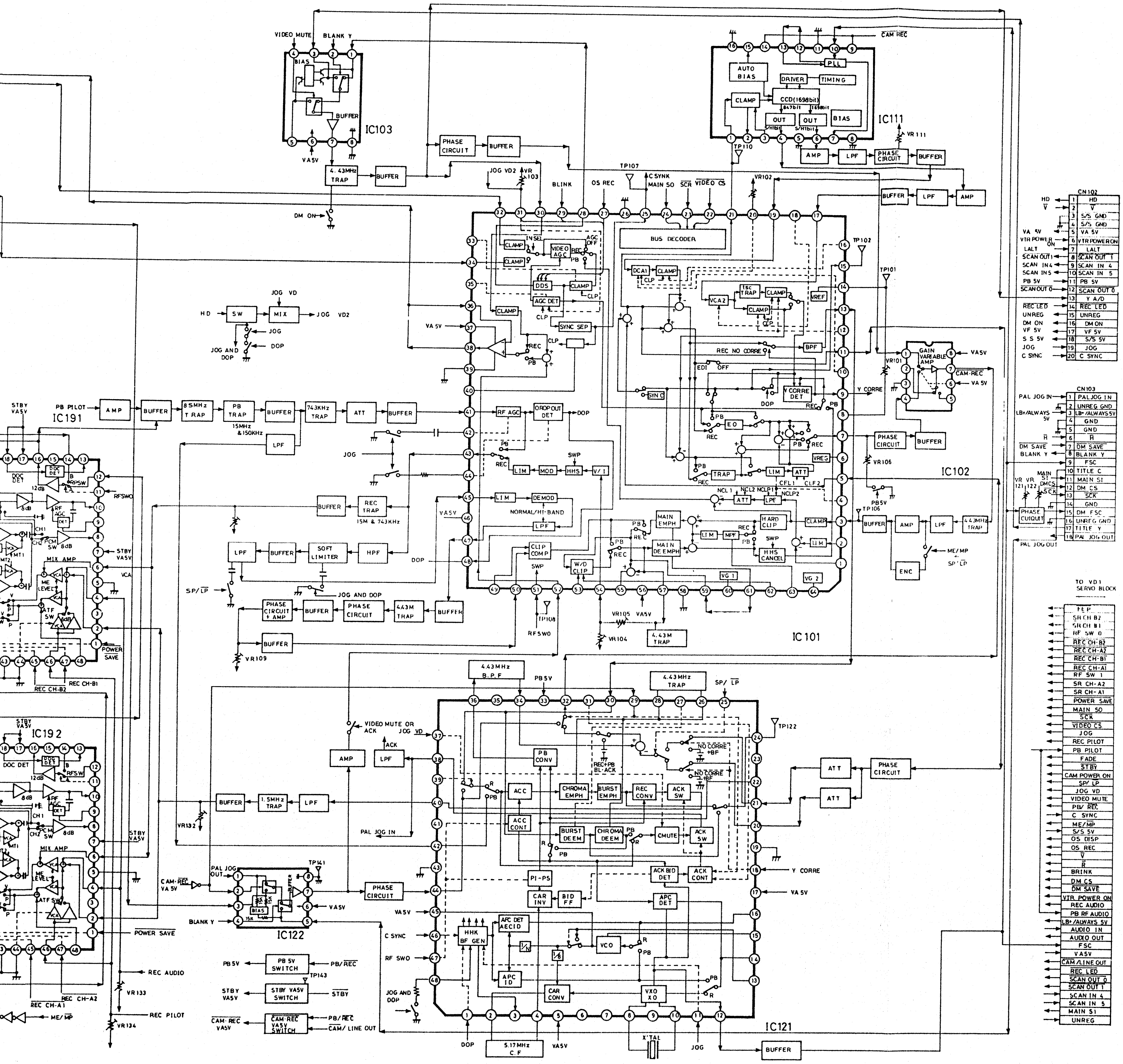
2-2. CAMERA BLOCK DIAGRAM


CA-1
CA-2
CA-3
TC-1
ICX026CK
BUFFER
IC903
CXD1250
DET
CLP
VSUB REG
IC902
CXD1253R
Timing Generator
OSC 28.375MHz
VR902 OFD
VR901 PGL
DECODER
from sys com
IC904
CXA1390R
AE·AGC TO TC-1
VR922
AGC
DETECTOR
VCC2
IRIS
TO TC-2
VG
WND
PBLK
CLP1
XSHP
XSHD
CLP4
XSH2
XSH1
IC906
CXL1508N
1HDL
CLP3
XDL1
XDL2
B.G TO TC-1
TO TC-1 R.G
IC 901
CXD1159
TO TC-1
LALT
BF
CBLK
SYNC
CL
VD
HD
4FSC
CT911
PLL
IC905
CXA1391R
VR904 Y1.G
VR906 B.C
VR907 R.C
KB CONTROL
MATRIX
WB AM
LPF
SLICE
KNEE
3H APCN
2H APCN
ABS
MAX
R-Y B-Y MTX Hue & GC
VR909 R-Y.H
VR911 B-Y.H
VR912 B-Y.G
VR913 R-Y.G
DL
AF.Y
AE·γ
TO TC-1 R-Y
TO TC-1 B-Y
AMP
GND
5V(MAIN)
5V(SUB)
15V
-9V
DC IN
POWER CONT
5V(CA1.CA2)
5V(TC1.TC2)
P.Csig
UNREG
DC/DC Covertor
IC941 Standard Cell
Timing
Clamp & Analog SW
6bit A D CONV
Adder
CPU i/f
Decoder
from CA-1 BLK
from CA-1 4fsc
from CA-1 R-Y
from CA-1 B-Y
from TC2 Iris D
AF.Y from CA-1
Amp
H.P.F 200KHz
H.P.F 500KHz
L.P.F peak Hold
AD AN IN
I/O port 1~6, 63
IC942
Micro-Computer
IC943
LB1830
IRIS.R
Unreg
TO TC-2
VR945 IRIS
SC Reg
TO CA-1
AE·γ
AE·AGC
AE·IRIS
VR946 B.G
VR947 R.G
TO CA-1
IC908
CXA1392R
VR918 Y.L
VR919 SETUP
SYNC
FADE VTR BLO
LEVEL CONT
HAPGAIN SLICE BLK
YTBLK
CLP4 BLK
ADD
1/4 TYP
CLP2 WC SETUP SYNC
LOGIT
REF V
SYNC BLK
CAMERA Y
CAMERA C
X1.6
BPF
CLP4 BURST
3/2
MOD BLK
2/3TYP
VR917 BST
CLP4
CLP2
B.GEN
1/4
LOGIC
MODEGEN
4FSC
LALT
BFG
BF
CBLK

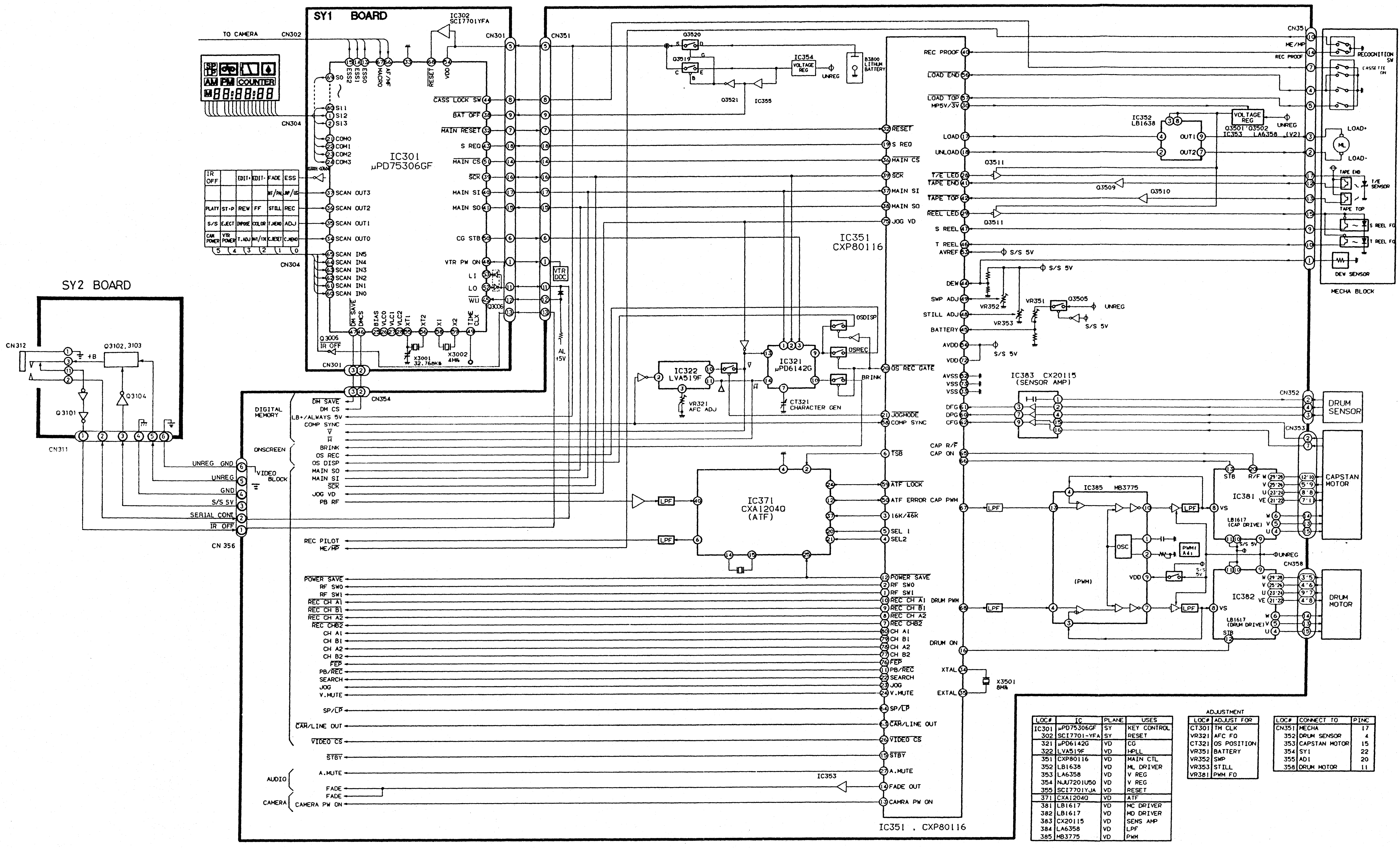

TC-1
TC-2
AE·AGC
TO TC-1
VR 922
AGC
OP
DETECTOR
VCC 2
CLP
BLK
WND
PBLK
CLP1
IRIS
TO TC-2
VG
WND
PBLK
CLP1
SLICE
GC
OR
MODE SW
MAX
LPF
XSP3
SH
IC906
CXL1508N
1HDL
B. G
TO TC-1
TO TC-1
R.G
VR906
VR907
B.G
R.G
KB CONTROL
MATRIX
WB AM
CLP (CLP2)
MPX
CLP (CLP4)
SLICE
γ
ABS
KNEE
3H APCN
2H APCN
R-Y B-Y MTX
Hue & GC
VR909
R-Y. H
VR 911
B-Y. H
VR 912
B-Y. G
VR 913
R-Y. G
DL
CLP4
CLP2
TO TC-1 R-Y
TO TC-1 B-Y
AMP
IC941
Standard Cell
from CA-1 BLK
from CA 1 4fsc
from CA 1 R-Y
from CA 1 B-Y
from TC2 Iris D
AF,Y from CA-1
Amp
H.P.F 200KHz
H.P.F 500 KHz
BLK
MCK1
MCKO
AWB1 (R-Y)
AWB2 (B-Y)
AE1
AF1
AF2
AD
ANIN
I/O port
1~6. 63
Timing
Clamp & Analog SW
6bit A D CONV
Adder
CPU i/f
Decoder
L.P.F peak Hold
IC942
Micro-Computer
TO CA-1
AE·γ
AE·AGC
AE·IRIS
VR948
B.G
VR947
R.G
TO CA-1
IRIS. R
TO TC-2
VR 945
IRIS
Unreg
IC943
LB1830
D1
MD
DO
SC
M1
S C Reg
from sys
Zoom SW
TO TC-1
Iris. D.
from TC-1
Iris R from CA-1
Iris.Y
Iris Det
IC951. IC952
Q9507
Driver
Q 9501
Iris M
Puls Gen
IC955. IC954
IC953
Focus SW
F M
Z M
Vcc
IN2
OUT1
IN1
OUT2
IC 956
LB 1830
Zoom Encoder
IC908
CXA1392R
DL
VR 918
Y. L
VR919
SETUP
FADE
VTR BLOCK
SYNC
LEVEL CONT
HAPGAIN SLICE BLK
-YTBLK
CLP4 BLK
ADD
GC
1.4 TYP
LEVEL CONT
CLP2 WC SETUP SYNC
LOGIT
REF V
SYNK C.BLK
ADD
CAMERA Y
CAMERA C
X1.6
BPF
CLP4 BURST
3/2
MOD BLK
CLP2
2/3TYP
VR917
BST
B. GEN
1/4
BFG
LOGIC
ADD
CLP4
MODEGEN
4FSC
LALT
BFG
BF
CBLK
Close up
Fade
Edit+
Edit-
Push AF
Back Light
AF/ ME
Hss
TO sys
Manual Iris

2-3. VIDEO BLOCK DIAGRAM


CN105
GND
VIDEO OUT
VIDEO IN
VIDEO GND
+B
AUDIO GND
AUDIO OUT
AUDIO IN
TP104
MIX
OS DISP
CN104
CAM POWER ON
FADE
CAMERA Y
CAMERA C
LALT
CN106
VF 5V
VF VIDEO
CN107
RF SW 1
PB RF
CN101
FE HEAD
CH-B2 HEAD
CH-A2 HEAD
CH-B1 HEAD
CH-A1 HEAD
R-T
SR CH-B2
SR CH-B1
SR CH-A1
SR CH-A2
IC191
IC192
REC DAMP
STBY VA5V
CH1 REC AMP
CH2 REC AMP
CH1 HEAD AMP
CH2 HEAD AMP
DOC DET
MIX AMP
ME LEVEL
ATF SW
CONTROL LOGIC
POWER SAVE
RF SW1
REC CH-B1
REC CH-B2
REC CH-A1
REC CH-A2
REC AUDIO
REC PILOT
VR133
VR134
ME/MP
AMP
FEP
PB PILOT
BUFFER
85MHz TRAP
PB TRAP
15MHz &150KHz
743KHz TRAP
ATT
LPF
REC TRAP
15M & 743KHz
SOFT LIMITER
HPF
PHASE CIRCUIT + AMP
PHASE CIRCUIT
4.43M TRAP
VR109
SP/LP
JOG AND DOP
VIDEO MUTE
BLANK Y
IC103
BIAS
4.43MHz TRAP
VA5V
DM ON
HD
SW
JOG VD
JOG VD2
JOG
DOP
JOG AND DOP
IC101
BUS DECODER
CLAMP
VIDEO AGC
AGC DET
DDS
SYNC SEP
RF AGC
DROP OUT DET
LIM
MOD
HHS
DE MOD
NORMAL/HI-BAND
CLIP COMP
W/D CLIP
MAIN EMPH
MAIN DE EMPH
VG 1
VG 2
TP107
C SYNC
MAIN SO
VIDEO CS
VR102
VR103
BLINK
OS REC
TP102
DCA1
VCA2
VREF
BPF
REC NO CORRE
Y CORRE DET
EO
TRAP
HARD CLIP
HHS CANCEL
RF SWO
TP108
VR104
VR105
4.43M TRAP
AUTO BIAS
DRIVER
TIMING
PLL
CCD(1698bit)
OUT
TP110
IC121
4.43MHz B.P.F
PB 5V
4.43MHz TRAP
VIDEO MUTE OR ACK
PB CONV
ACC
CHROMA EMPH
BURST EMPH
REC CONV
ACK SW
ACC CONT
BURST DEEM
CHROMA DEEM
CMUTE
ACK BID DET
ACK CONT
APC DET
PI-PS
CAR INV
BID FF
HHK BF GEN
AFC DET AECID
VCO
APC ID
CAR CONV
VXO XO
5.17MHz C.F
X'TAL
TP122
Y CORRE
NO CORRE
1.5MHz TRAP
VR132
PAL JOG IN
PAL JOG OUT
IC122
TP141
CAM·REC VA 5V
PB 5V SWITCH
TP143
STBY VA5V SWITCH
CAM·REC VA5V SWITCH
PB/REC
STBY
CAM/LINE OUT
C SYNC
RF SWO


VIDEO MUTE
BLANK Y
BIAS
BUFFER
IC103
VA5V
4.43MHz TRAP
BUFFER
DM ON
PHASE CIRCUIT
BUFFER
JOG VD2
VR 103
BLINK
OS REC
TP107
C SYNK
MAIN SO
SCK
VIDEO CS
VR102
CAM REC
AUTO BIAS
DRIVER
TIMING
PLL
CLAMP
CCD(1698bit)
OUT
BIAS
IC111
VR111
TP110
AMP
LPF
PHASE CIRCUIT
BUFFER
BUS DECODER
CLAMP
INSEL
VIDEO AGC
AGC OFF
DDS
AGC DET
SYNC SEP
CLP
DCA1
VCA2
TRAP
VREF
BPF
REC NO CORRE
Y CORRE DET
SYNC
EO
TRAP
LIM
ATT
VREG
CFL1
CLF2
NCL1
NCL2
NCLP1
NCLP2
LPF
MAIN EMPH
MAIN DE EMPH
HARD CLIP
MPF
HHS CANCEL
VG 1
VG 2
TP102
TP101
IC 101
GAIN VARIABLE AMP
CAM-REC
VA 5V
VR101
Y CORRE
IC102
TP106
PB5V
VR106
BUFFER
AMP
LPF
4.43MHz TRAP
ENC
ME/MP
SP/LP
HD
SW
MIX
JOG VD
JOG VD2
JOG
DOP
JOG AND DOP
STBY VA5V
PB PILOT
AMP
BUFFER
85MHz TRAP
PB TRAP
15MHz & 150KHz
743KHz TRAP
ATT
RF AGC
DROPOUT DET
LPF
LIM
MOD
HHS
V/I
DEMOD
NORMAL/HI-BAND
CLIP COMP
W/D CLIP
SWP
REC TRAP
15M & 743KHz
SOFT LIMITER
HPF
PHASE CIRCUIT + AMP
PHASE CIRCUIT
4.43M TRAP
RF SWO
TP108
VR105
VR104
4.43M TRAP
VR109
IC191
DOC DET
RF AGC
PCM SW
MIX AMP
ME LEVEL
ATF SW
POWER SAVE
REC CH-B2
REC CH-B1
RFSWO
IC192
REC CH-A2
REC CH-A1
REC AUDIO
REC PILOT
VR133
VR134
ME/MP
4.43MHz B.P.F
PB5V
4.43MHz TRAP
SP/LP
TP122
VIDEO MUTE OR ACK
ACK
AMP
PB CONV
ACC
ACC CONT
CHROMA EMPH
BURST EMPH
REC CONV
ACK SW
BURST DEEM
CHROMA DEEM
CMUTE
NO CORRE +BF
REC+PB BL-ACK
PI-PS
CAR INV
BID FF
ACK BID DET
ACK CONT
APC DET
HHK BF GEN
APC DET AECID
VCO
APC ID
CAR CONV
VXO XO
X'TAL
5.17MHz C.F
IC121
BUFFER
ATT
PHASE CIRCUIT
Y CORRE
1.5MHz TRAP
VR132
PAL JOG IN
PAL JOG OUT
CAM-REC VA 5V
BLANK Y
TP141
IC122
POWER SAVE
PB 5V SWITCH
STBY VA5V SWITCH
CAM-REC VA5V SWITCH
PB/REC
STBY
CAM/LINE OUT
TP143
C SYNC
RF SWO
DOP
VA5V
JOG
CN102
1 HD
2 V
3 S/S GND
4 S/S GND
5 VA 5V
6 VTR POWER ON
7 LALT
8 SCAN OUT 1
9 SCAN IN 4
10 SCAN IN 5
11 PB 5V
12 SCAN OUT 0
13 Y A/D
14 REC LED
15 UNREG
16 DM ON
17 VF 5V
18 S/S 5V
19 JOG
20 C SYNC
CN103
1 PAL JOG IN
2 UNREG GND
3 LB+/ALWAYS 5V
4 GND
5 GND
6 R
7 DM SAVE
8 BLANK Y
9 FSC
10 TITLE C
11 MAIN SI
12 DM CS
13 SCK
14 GND
15 DM FSC
16 UNREG GND
17 TITLE Y
18 PAL JOG OUT
VR 121
VR 122
PHASE CUIQUIT
TO VD1 SERVO BLOCK
FEP
SR CH B2
SR CH B1
RF SW 0
REC CH-B2
REC CH-A2
REC CH-B1
REC CH-A1
RF SW 1
SR CH-A2
SR CH-A1
POWER SAVE
MAIN SO
SCK
VIDEO CS
JOG
REC PILOT
PB PILOT
FADE
STBY
CAM POWER ON
SP/LP
JOG VD
VIDEO MUTE
PB/REC
C SYNC
ME/MP
S/S 5V
OS DISP
OS REC
V
R
BRINK
DM CS
DM SAVE
VTR POWER ON
REC AUDIO
PB RF AUDIO
LB+/ALWAYS 5V
AUDIO IN
AUDIO OUT
FSC
VA5V
CAM/LINE OUT
REC LED
SCAN OUT 0
SCAN OUT 1
SCAN IN 4
SCAN IN 5
MAIN S1
UNREG

2-4. SERVO/SYSTEM CONTROL BLOCK DIAGRAM


SY1 BOARD
SY2 BOARD
IC301 μPD75306GF
IC302 SCI7701YFA
TO CAMERA
CN302
CN304
CN301
CN351
CN311
CN312
CN356
CN354
Q3102, 3103
Q3104
Q3101
UNREG GND
UNREG
GND
S/S 5V
SERIAL CONT
IR OFF
VIDEO BLOCK
DIGITAL MEMORY
ONSCREEN
AUDIO
CAMERA
SCAN OUT0
SCAN OUT1
SCAN OUT2
SCAN OUT3
SCAN IN0
SCAN IN1
SCAN IN2
SCAN IN3
SCAN IN4
SCAN IN5
CASS LOCK SW
BAT OFF
MAIN RESET
S REQ
MAIN CS
SCK
MAIN SI
MAIN SO
CG STB
VTR PW ON
X3001 32.768KHz
X3002 4MHz
VTR DDC
AL +5V
Q3520
Q3519
Q3521
IC355
IC354 VOLTAGE REG
B3800 LITHIUM BATTERY
IC322 LVA519F
VR321 AFC ADJ
IC321 μPD6142G
CT321 CHARACTER GEN
OSDISP
OSREC
BRINK
IC371 CXA12040 (ATF)
LPF
IC351 CXP80116
REC PROOF
LOAD END
LOAD TOP
MP5V/3V
LOAD
UNLOAD
T/E LED
TAPE END
TAPE TOP
REEL LED
S REEL
T REEL
AVREF
DEW
SWP ADJ
STILL ADJ
BATTERY
AVDD
VDD
AVSS
VSS
DFG
DPG
CFG
CAP R/F
CAP ON
ATF LOCK
ATF ERROR
CAP PWM
16K/46K
SEL 1
SEL2
DRUM PWM
DRUM ON
XTAL
EXTAL
X3501 8MHz
IC352 LB1638
Q3501 Q3502
IC353 LA6358 (V2)
VOLTAGE REG
Q3511
Q3509
Q3510
VR351
VR352
VR353
Q3505
IC383 CX20115 (SENSOR AMP)
IC385 MB3775
OSC
(PWM)
IC381 LB1617 (CAP DRIVE)
IC382 LB1617 (DRUM DRIVE)
CN352
CN353
CN358
DRUM SENSOR
CAPSTAN MOTOR
DRUM MOTOR
MECHA BLOCK
RECOGNITION SW
CASSETTE ON
TAPE END
T/E SENSOR
TAPE TOP
S REEL FG
T REEL FG
DEW SENSOR
POWER SAVE
RF SW0
RF SW1
REC CH A1
REC CH B1
REC CH A2
REC CH B2
CH A1
CH B1
CH A2
CH B2
FEP
PB/REC
SEARCH
JOG
V.MUTE
SP/LP
CAM/LINE OUT
VIDEO CS
STBY
A.MUTE
FADE
FADE OUT
CAMERA PW ON
IC353
IC351 , CXP80116

LOC#	IC	PLANE	USES
IC301	μPD75306GF	SY	KEY CONTROL
302	SCI7701-YFA	SY	RESET
321	μPD6142G	VD	CG
322	LVA519F	VD	HPLL
351	CXP80116	VD	MAIN CTL
352	LB1638	VD	ML DRIVER
353	LA6358	VD	V REG
354	NJU7201U50	VD	V REG
355	SCI7701YJA	VD	RESET
371	CXA12040	VD	ATF
381	LB1617	VD	MC DRIVER
382	LB1617	VD	MD DRIVER
383	CX20115	VD	SENS AMP
384	LA6358	VD	LPF
385	MB3775	VD	PWM

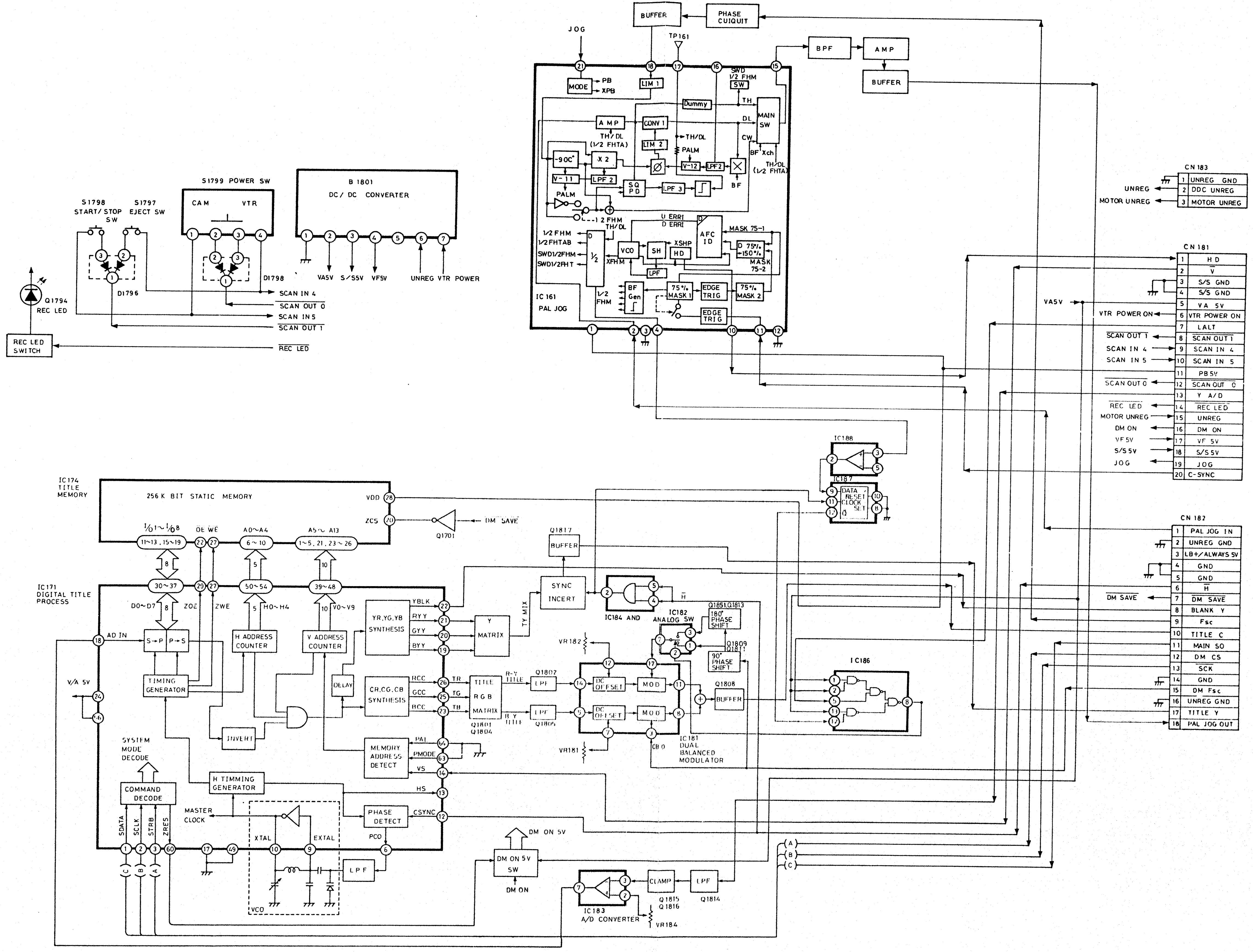
ADJUSTMENT

LOC#	ADJUST FOR
CT301	TM CLK
VR321	AFC FO
CT321	OS POSITION
VR351	BATTERY
VR352	SWP
VR353	STILL
VR381	PWM FO

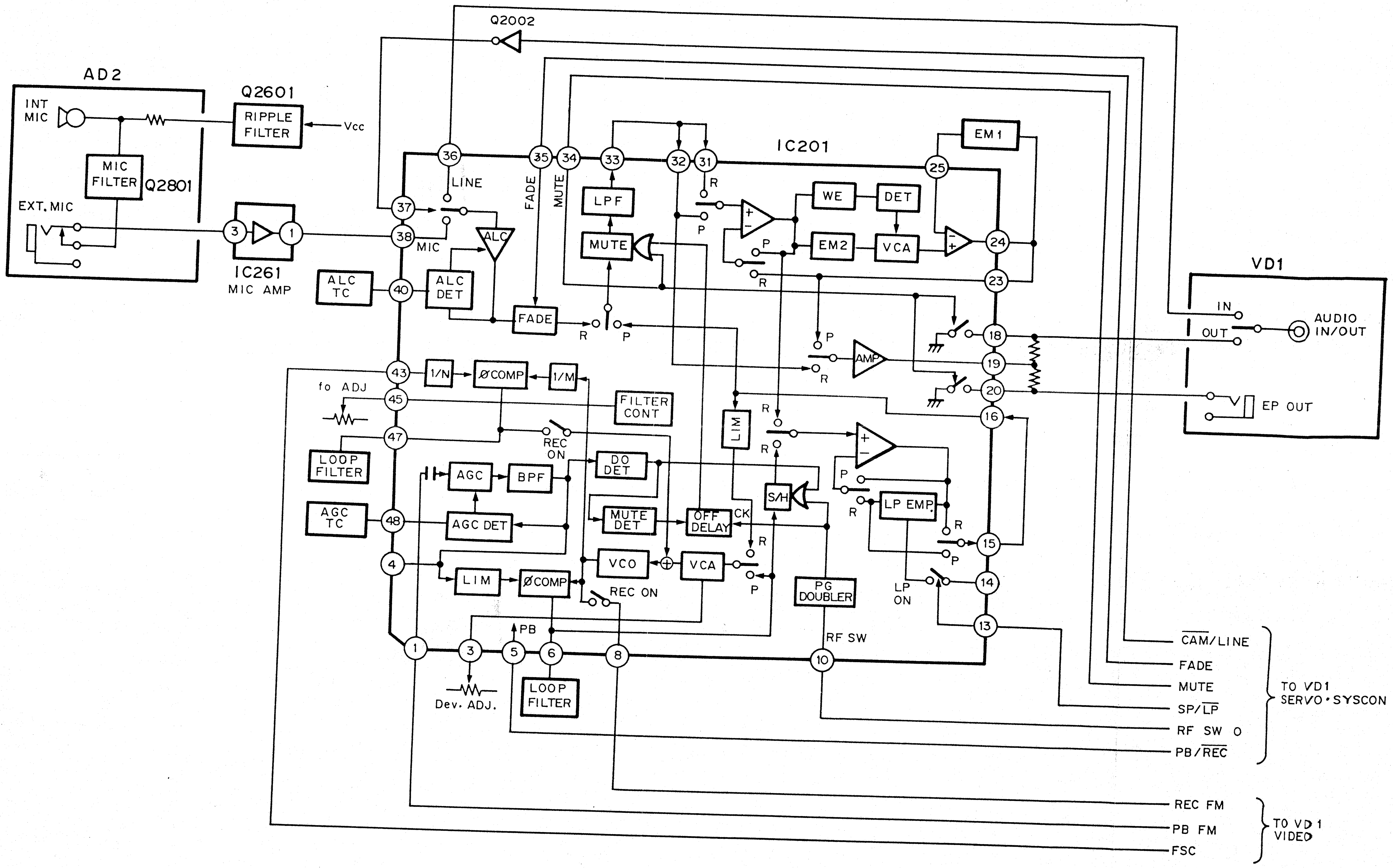
LOC#	CONNECT TO	PINC
CN351	MECHA	17
352	DRUM SENSOR	4
353	CAPSTAN MOTOR	15
354	SY1	22
355	AD1	20
358	DRUM MOTOR	11

3-5 サーボ システムコントロールブロックダイヤグラム

2-5. DIGITAL MEMORY · POWER BLOCK DIAGRAM

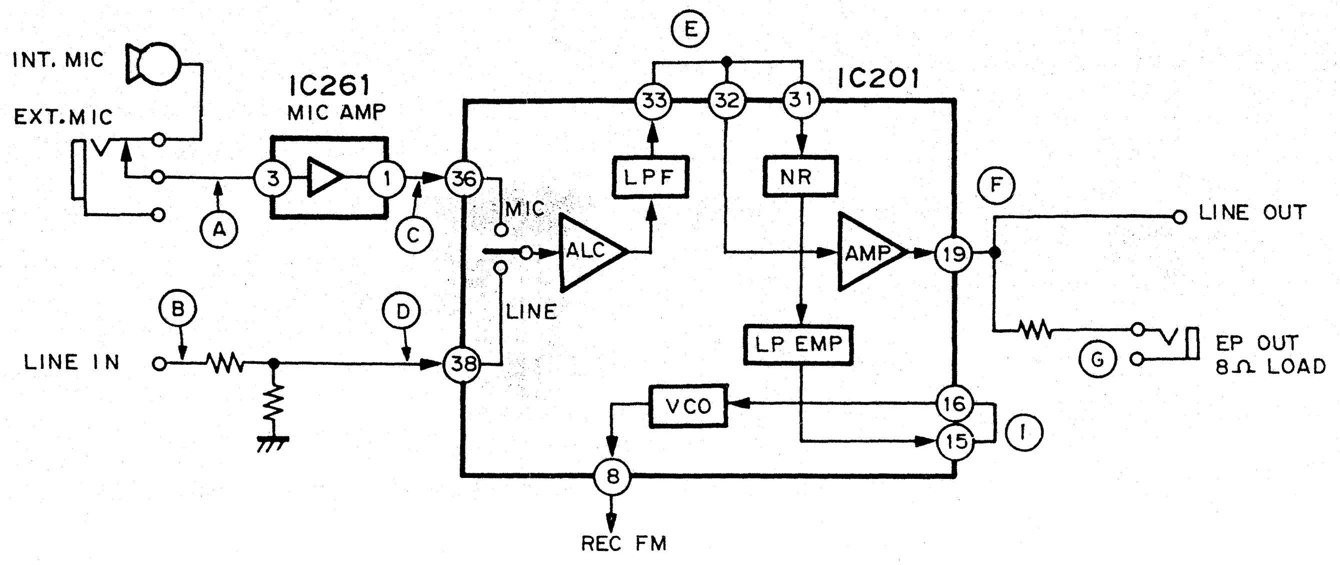

S1799 POWER SW
CAM
VTR
S1798 START/STOP SW
S1797 EJECT SW
D1796
D1798
Q1794 REC LED
REC LED SWITCH
B 1801 DC/DC CONVERTER
VA5V
S/S5V
VF5V
UNREG
VTR POWER
SCAN IN 4
SCAN OUT 0
SCAN IN 5
SCAN OUT 1
REC LED
JOG
BUFFER
PHASE CUIQUIT
TP161
BPF
AMP
BUFFER
MODE
PB
XPB
LIM 1
SWD 1/2 FHM SW
Dummy
TH
DL
MAIN SW
CW
AMP
CONV 1
TH/DL (1/2 FHTA)
LIM 2
TH/DL
PALM
-90°
X 2
V-11
LPF 2
V-12
LPF 2
BF Xch
TH/DL (1/2 FHTA)
BF
SQ PD
LPF 3
PALM
-1 2 FHM
1/2 FHM
1/2 FHTAB
SWD1/2FHM
SWD1/2FHT
1/2
TH/DL
XFHM
VCO
SH
HD
XSHP
LPF
U ERRI
D ERRI
AFC ID
MASK 75-1
D 75%
150%
MASK 75-2
1/2 FHM
BF Gen
75% MASK 1
EDGE TRIG
75% MASK 2
EDGE TRIG
IC 161 PAL JOG
CN 183
UNREG
MOTOR UNREG
1 UNREG GND
2 DDC UNREG
3 MOTOR UNREG
CN 181
1 HD
2 V
3 S/S GND
4 S/S GND
5 VA 5V
6 VTR POWER ON
7 LALT
8 SCAN OUT 1
9 SCAN IN 4
10 SCAN IN 5
11 PB 5V
12 SCAN OUT 0
13 Y A/D
14 REC LED
15 UNREG
16 DM ON
17 VF 5V
18 S/S 5V
19 JOG
20 C-SYNC
VA5V
VTR POWER ON
SCAN OUT 1
SCAN IN 4
SCAN IN 5
SCAN OUT 0
REC LED
MOTOR UNREG
DM ON
VF 5V
S/S 5V
JOG
IC188
IC187
DATA
RESET
CLOCK
SET
CN 182
1 PAL JOG IN
2 UNREG GND
3 LB+/ALWAYS 5V
4 GND
5 GND
6 H
7 DM SAVE
8 BLANK Y
9 Fsc
10 TITLE C
11 MAIN SO
12 DM CS
13 SCK
14 GND
15 DM Fsc
16 UNREG GND
17 TITLE Y
18 PAL JOG OUT
DM SAVE
IC174 TITLE MEMORY
256K BIT STATIC MEMORY
VDD
ZCS
DM SAVE
Q1701
I/O1~I/O8
11~13, 15~19
OE WE
A0~A4
6~10
A5~A13
1~5, 21, 23~26
8
5
10
IC171 DIGITAL TITLE PROCESS
30~37
50~54
39~48
D0~D7
ZOE
ZWE
H0~H4
V0~V9
AD IN
S→P
P→S
H ADDRESS COUNTER
V ADDRESS COUNTER
YBLK
YR,YG,YB SYNTHESIS
RYY
GYY
BYY
DELAY
RCC
GCC
BCC
CR,CG,CB SYNTHESIS
TIMING GENERATOR
INVERT
MEMORY ADDRESS DETECT
PAL
PMODE
VS
HS
H TIMMING GENERATOR
PHASE DETECT
CSYNC
PCO
V/A 5V
SYSTEM MODE DECODE
COMMAND DECODE
SDATA
SCLK
STRB
ZRES
MASTER CLOCK
XTAL
EXTAL
VCO
LPF
Q1817 BUFFER
SYNC INCERT
TY MIX
Y MATRIX
TR
TG
TB
TITLE RGB MATRIX
Q1801 Q1804
R-Y TITLE
B-Y TITLE
LPF
Q1807
Q1806
IC184 AND
IC182 ANALOG SW
Q1851,Q1813 180° PHASE SHIFT
90° PHASE SHIFT
Q1809 Q1811
VR182
VR181
DC OFFSET
MOD
Q1808 BUFFER
IC181 DUAL BALANCED MODULATOR
CB 0
IC186
DM ON 5V
DM ON 5V SW
DM ON
IC183 A/D CONVERTER
VR184
CLAMP
LPF
Q1815 Q1816
Q1814
A
B
C

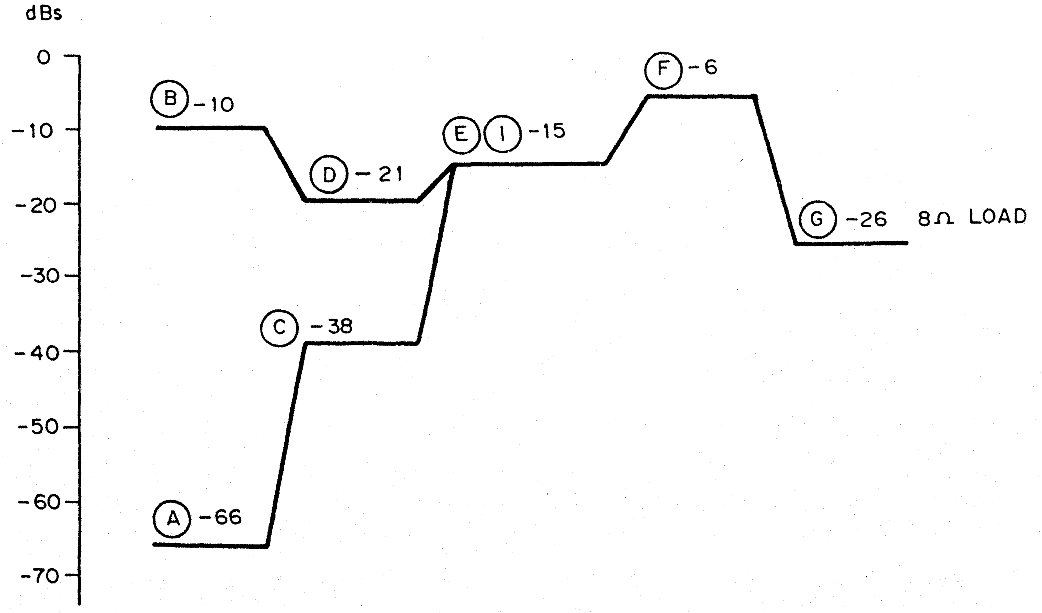
2-6. AUDIO BLOCK DIAGRAM


AD2
INT MIC
MIC FILTER
Q2801
EXT. MIC
Q2601
RIPPLE FILTER
Vcc
3
1
IC261
MIC AMP
Q2002
IC201
36
35
34
33
32
31
25
37
38
40
43
45
47
48
4
1
3
5
6
8
10
13
14
15
16
18
19
20
23
24
LINE
MIC
ALC
ALC TC
ALC DET
FADE
MUTE
LPF
MUTE
FADE
R
P
EM1
WE
DET
EM2
VCA
AMP
1/N
ØCOMP
1/M
fo ADJ
FILTER CONT
REC ON
LOOP FILTER
AGC
BPF
DO DET
AGC TC
AGC DET
MUTE DET
OFF DELAY
CK
LIM
S/H
LP EMP
VCO
VCA
LIM
ØCOMP
REC ON
PG DOUBLER
RF SW
LP ON
PB
Dev. ADJ.
LOOP FILTER
VD1
IN
OUT
AUDIO IN/OUT
EP OUT
CAM/LINE
FADE
MUTE
SP/LP
RF SW 0
PB/REC
TO VD1 SERVO·SYSCON
REC FM
PB FM
FSC
TO VD1 VIDEO

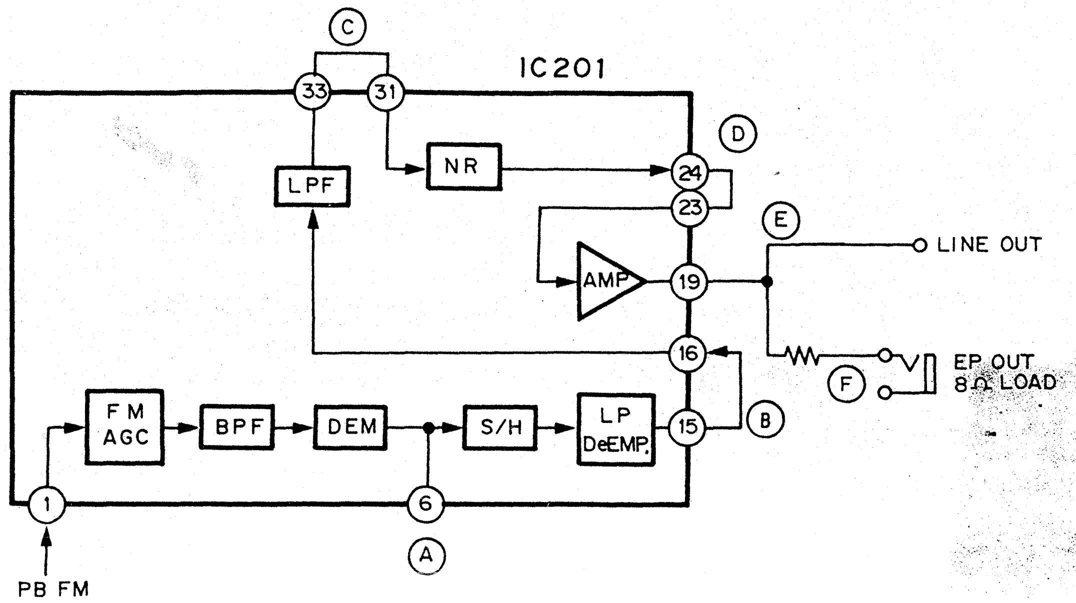
2-7. AUDIO LEVEL DIAGRAM

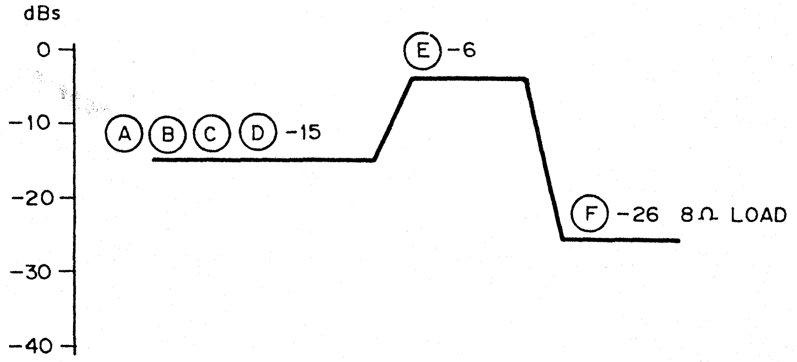
REC


INT. MIC
EXT.MIC
IC261
MIC AMP
3
1
A
C
B
D
LINE IN
IC201
E
33
32
31
36
38
MIC
LINE
ALC
LPF
NR
AMP
LP EMP
VCO
19
16
15
8
I
F
G
LINE OUT
EP OUT
8Ω LOAD
REC FM

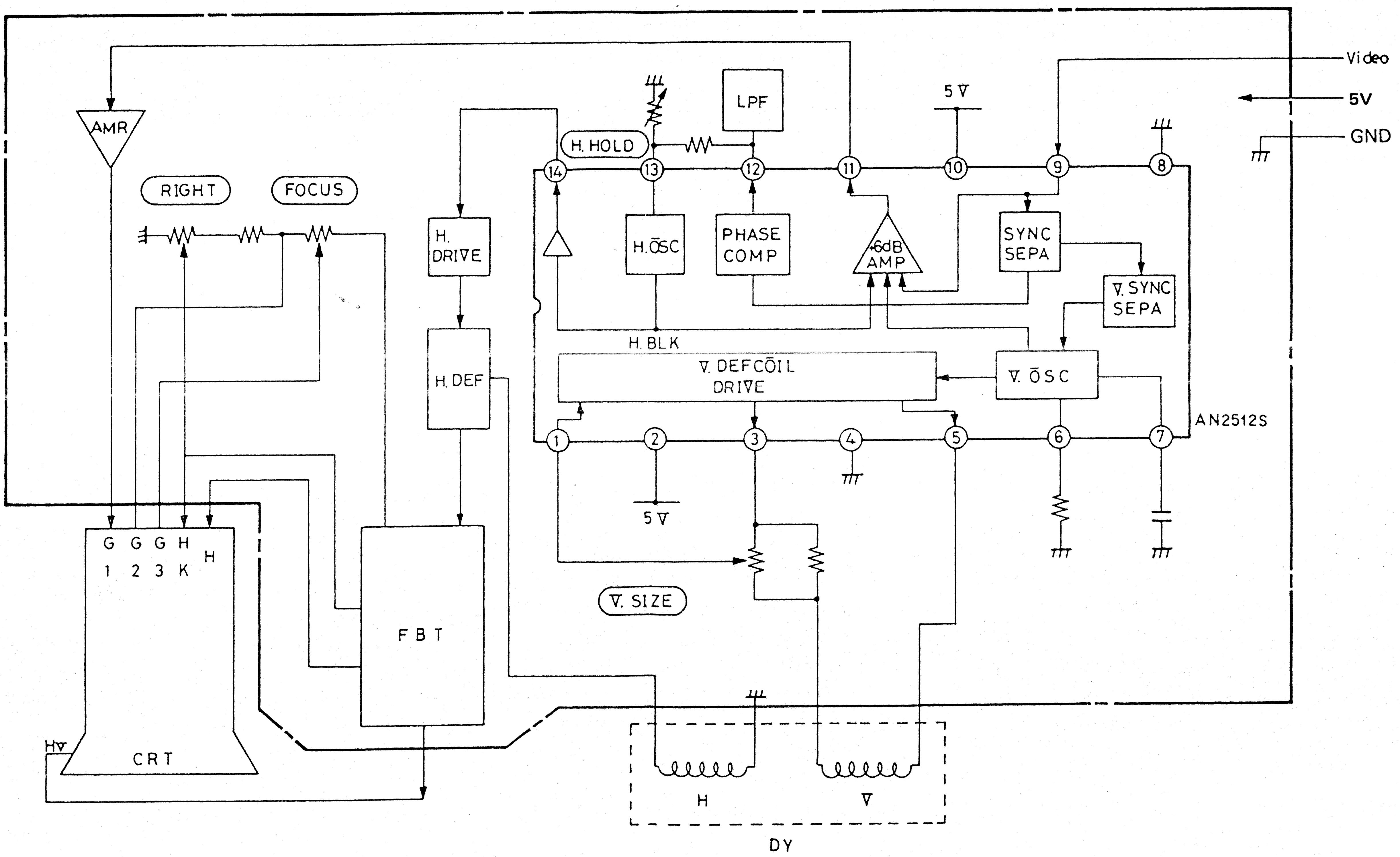


PB


C
IC201
33
31
LPF
NR
D
24
23
AMP
19
16
15
E
LINE OUT
EP OUT
8Ω LOAD
F
B
FM AGC
BPF
DEM
S/H
LP DeEMP.
1
6
A
PB FM



2-8. EVF BLOCK DIAGRAM


Video
5V
GND
AMR
RIGHT
FOCUS
H. DRIVE
H. DEF
H. HOLD
H. ŌSC
PHASE COMP
LPF
+6dB AMP
SYNC SEPA
V̄. SYNC SEPA
V̄. ŌSC
V̄. DEFCŌIL DRIVE
H. BLK
AN2512S
14
13
12
11
10
9
8
1
2
3
4
5
6
7
5V̄
5V̄
V̄. SIZE
G G G H
1 2 3 K
H
FBT
CRT
HV̄
H
V̄
DY

3. ADJUSTMENT

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1-8. AGC Level Adjustment 33
1-9. Y1 Level Adjustment 33
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5. VR, TP LOCATION ………… 85

1. CAMERA BLOCK ADJUSTMENT

1-1. TABLE FOR SERVICING TOOLS

Ref. No	Name	Part code
J-1	Color viewer 5100° K	VJ8-0007
J-2	Halogen viewer 2800° K	VJ8-0019
J-3	Gray scale	VJ8-0010
J-4	Color bar chart	VJ8-0009
J-5	Color temperature conversion filter (LBA8)	VJ8-0002
J-6	Socket pull-out tool	VJ8-0030
J-7	Camera block fixing tool	VJ8-0088
J-8	Pan head	VJ8-0020
J-9	PCB extension cord	VJ8-0089
J-10	Relation FPC	VJ8-0090
J-11	Extension FPC	VJ8-0091
J-12	Extension cord	VJ8-0092
J-13	Extension cord	VJ8-0093

Note) Either J2 or J5 can be used.

1-2. EQUIPMENTS

1. Vectorscope
2. Oscilloscope
3. Color monitor
4. Digital volt meter
5. AV cord

1-3. ADJUSTMENT ORDER

1. Board voltage adjustment
2. Iris level adjustment
3. AGC level adjustment
4. Y1 level adjustment
5. Y pedestal adjustment
6. Y video level adjustment
7. PLL Lock Voltage Adjustment
8. Burst level adjustment
9. Chroma balance adjustment
10. Chroma hue adjustment
11. White balance adjustment (1)
12. White balance adjustment (2)

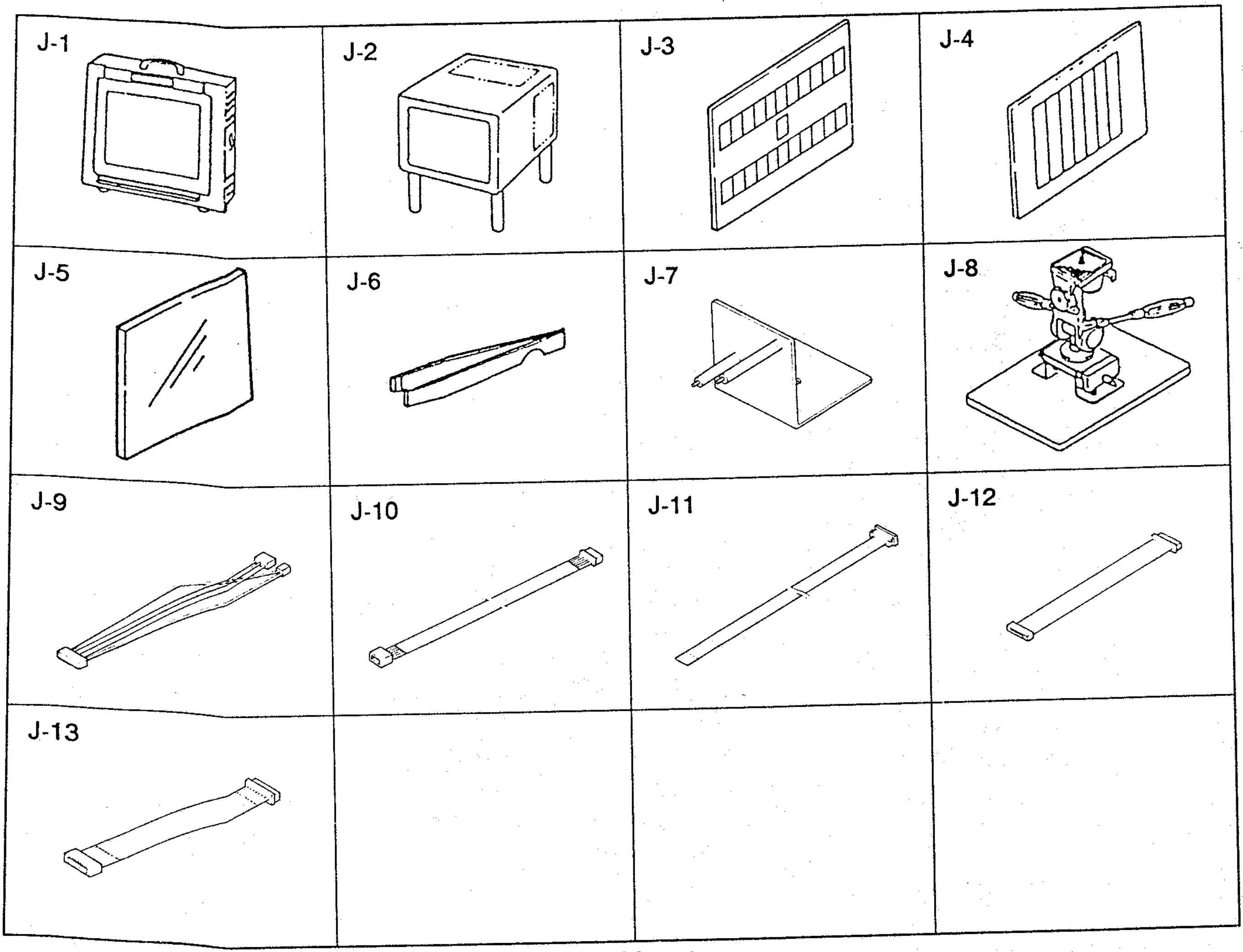


Table 1-1.

1-4. SETUP AND CONNECTION

Refer to "1. Removal method of each section" to remove the cabinet and each board.

1) Set the camera block to the tool J-7 as shown in Fig. 1-1.
2) Set up the camera block and VTR block as shown in Fig. 1-2.

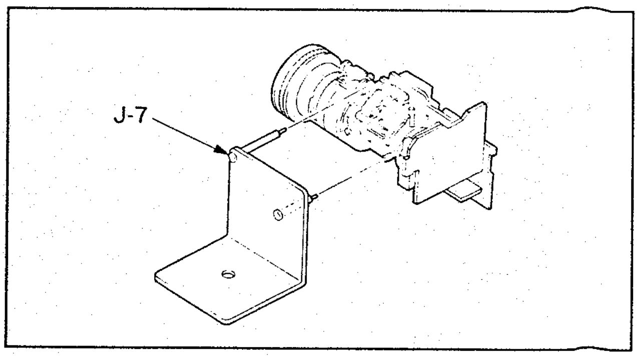


Fig. 1-1.

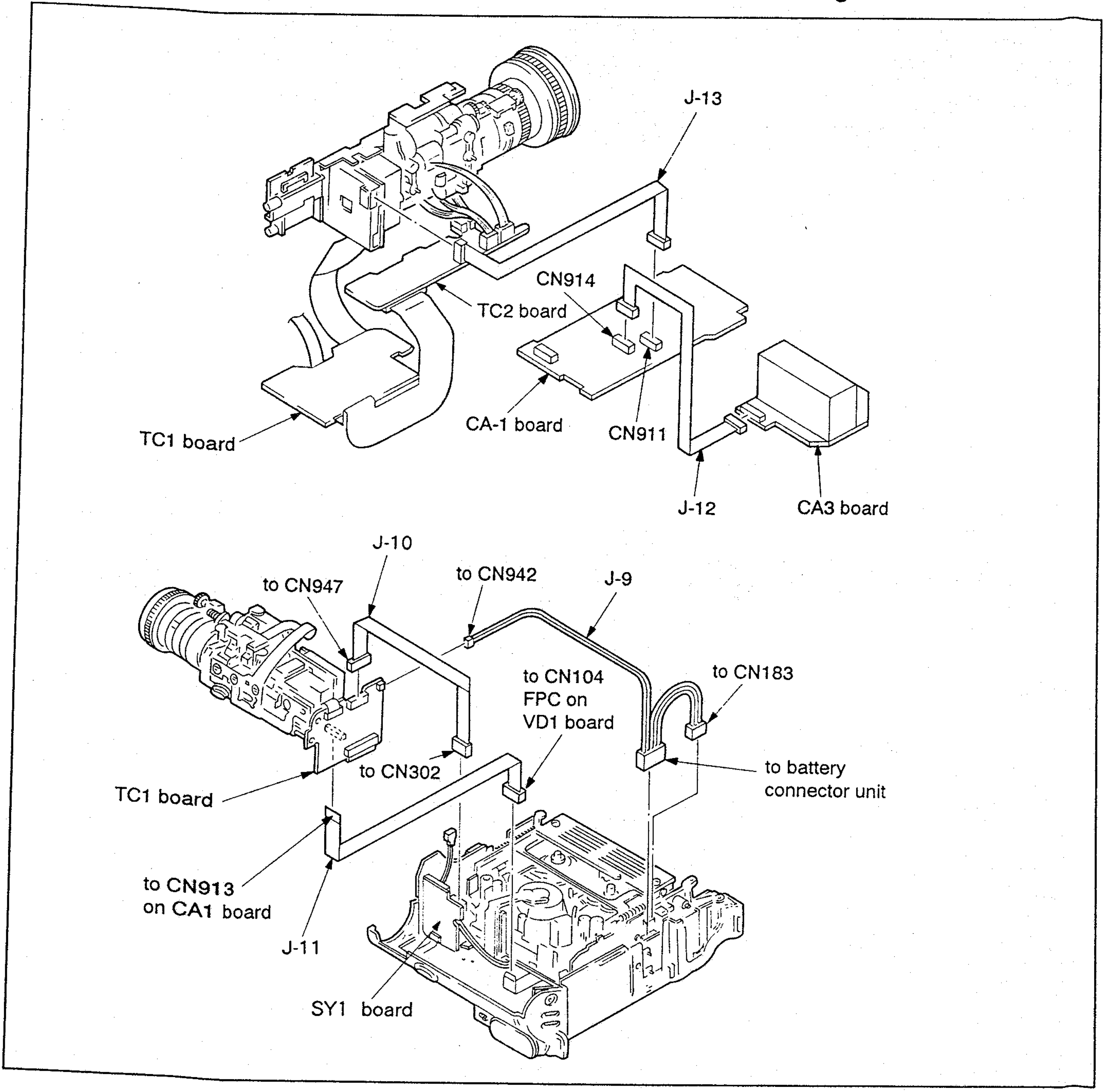

J-13
CN914
TC2 board
TC1 board
CA-1 board
CN911
J-12
CA3 board
J-10
to CN947
to CN942
J-9
to CN104
FPC on
VD1 board
to CN183
to battery
connector unit
to CN302
TC1 board
to CN913
on CA1 board
J-11
SY1 board

Fig. 1-2.

(3) Connection of equipments

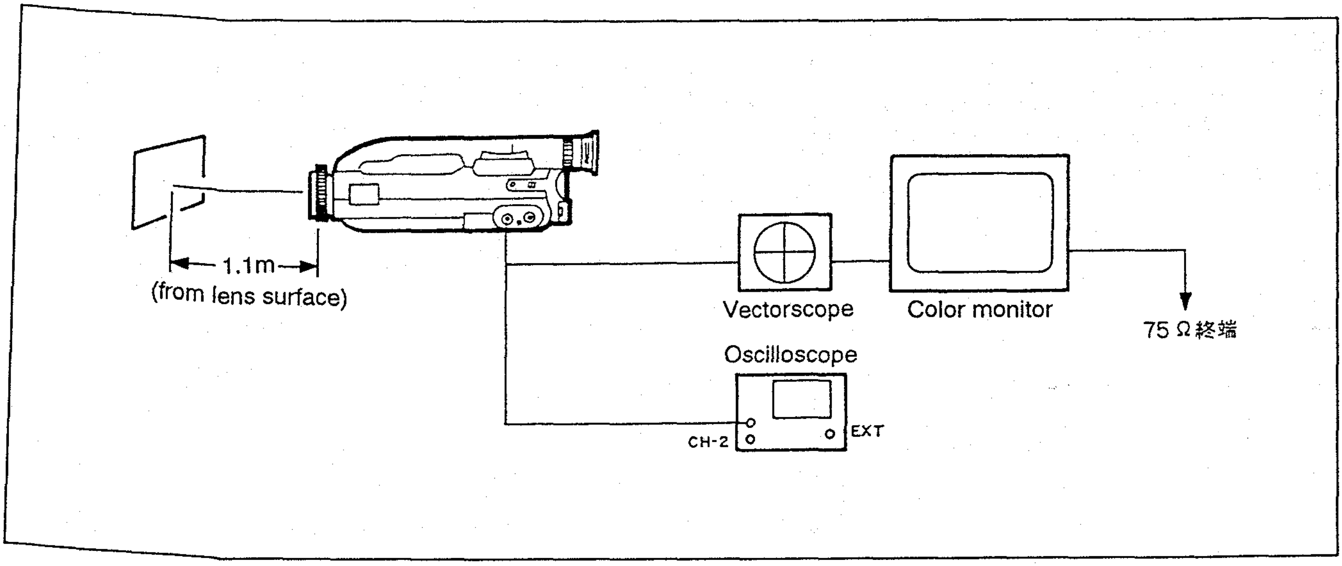

1.1m
(from lens surface)
Vectorscope
Color monitor
75 Ω終端
Oscilloscope
CH-2
EXT

Fig. 1-3.

1-5. STANDARD SETTING

1) Use the 5100 ° K viewer for a subject.
2) When using the gray scale or the color bar, set the picture frame to 35 µsec for the gray scale or 48 µsec for the color bar, respectively as shown in Fig. 1-4 and Fig. 1-5.

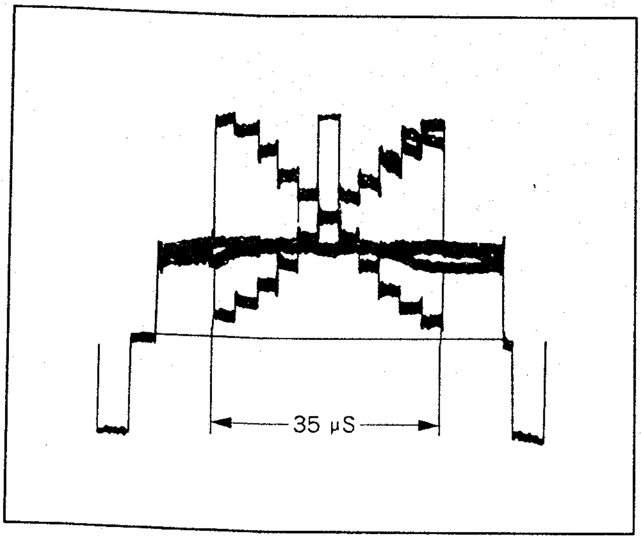


Fig. 1-4. **Standard picture frame for gray scale**

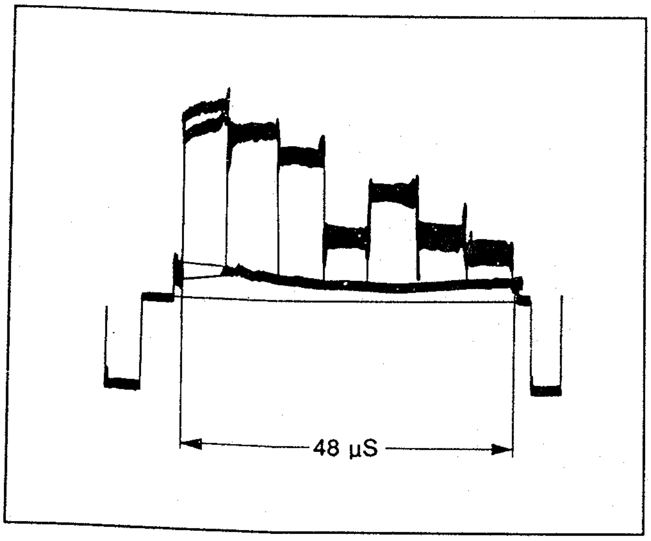


Fig. 1-5. **Standard picture frame for color bar**

3) Connect Pin ① of CN944 on the TC1 board to GND. (Pin ② of CN944 is OPEN.)
   Note that 1-17. WHITE BALANCE ADJUSTMENT (2) is excluded.
4) Set the manual iris VR to the mechanical center position (click point).
5) For the adjustment using the oscilloscope, use TP906 (CLP3) as a trigger.
6) Input the video output to the oscilloscope and set the SYNC level to 30% by adjusting the GAIN control.
7) Set the line select switch of the vectorscope to +V.
8) Perform aging for ten minutes before adjustment.

1-6. BOARD VOLTAGE ADJUSTMENT

Measurement Point:	TP902 (PG. L), TP903 (V SUB)
Measuring Equipment:	Digital voltmeter or Oscilloscope
Adjusting Element:	VR901 (PG. L), VR902 (V SUB)

Adjusting method:

Adjust to the voltage (abbreviated) displayed on the reverse side of the CCD. Abbreviations are displayed in a number of two figures.

* *

V PGL Abbreviation   V SUB Abbreviation

The abbreviated integer section is applied as shown in the table below.

V PGL Abbreviation	0	1	2	3	4	5
Actual value	0.5	1.0	1.5	2.0	2.5	3.0
V PGL Abbreviation	6	7	8	9		
Actual value	3.5	4.0	4.5	5.0		

V SUB Abbreviation	A	B	C	D	E	F
Actual value	7.0	7.5	8.0	8.5	9.0	9.5
V SUB Abbreviation	G	H	J	K	L	M
Actual value	10.0	10.5	11.0	11.5	12.0	12.5
V SUB Abbreviation	N	P	Q	R	S	T
Actual value	13.0	13.5	14.0	14.5	15.0	15.5
V SUB Abbreviation	U	V	W	X	Y	Z
Actual value	16.0	16.5	17.0	17.5	18.0	18.5

<Example>

"5L" → V PGL=3.0V ± 0.1V
V SUB=12.0V ± 0.2V

1-7. IRIS LEVEL ADJUSTMENT

Subject:	Gray scale (Standard picture frame)
Measurement Point:	TP904 (IRIS)
Measuring Equipment:	Oscilloscope (10 µsec/div, 100 mV/div)
Adjustment VR:	VR945 (IRIS)
Adjustment Value:	500 mV ± 10 mV

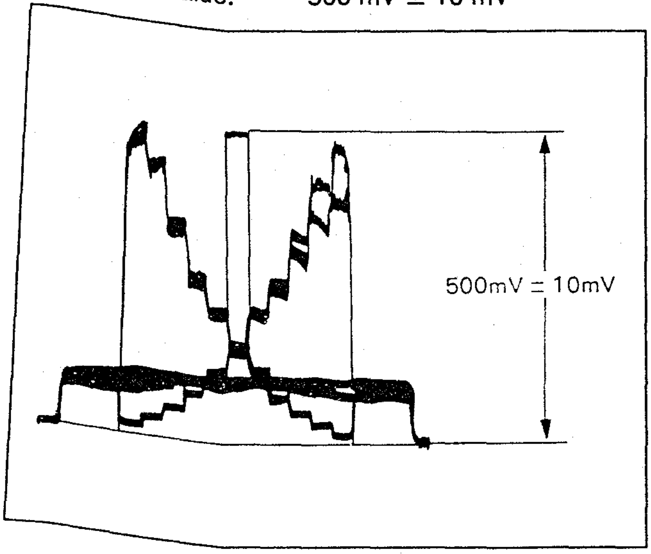


Fig. 1-6.

1-8. AGC LEVEL ADJUSTMENT

Subject:	Gray scale (Standard picture frame)
Measurement Point:	TP905 (YH)
Measuring Equipment:	Oscilloscope (10 µsec/div, 50 mV/div)
Adjustment VR:	VR922 (AGC)
Adjustment Value:	270 mV ± 10 mV

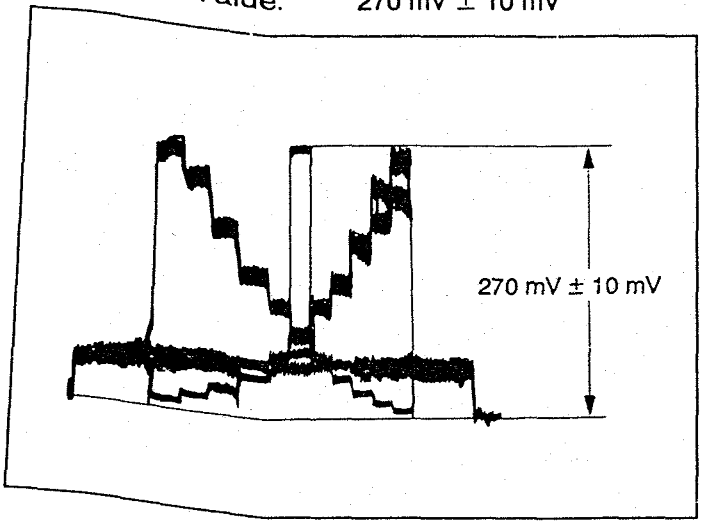


Fig. 1-7.

1-9. Y1 LEVEL ADJUSTMENT

Subject:	Gray scale (Standard picture frame)
Measurement Point:	TP912 (VAP)
Measuring Equipment:	Oscilloscope (20 µsec/div, 20 mV/div)
Adjustment VR:	VR904 (Y1-G)

Adjusting method:
Connect the oscilloscope to TP912 (VAP). And adjust so that the waveform of the gray scale vanishes.

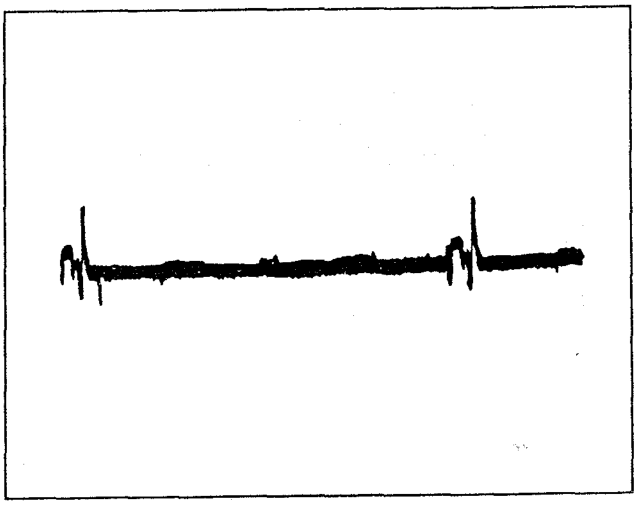


Fig. 1-8.

1-10. Y PEDESTAL LEVEL ADJUSTMENT

Subject:	Lens cap attached
Measurement Point:	TP909 (Y OUT)
Measuring Equipment:	Oscilloscope
Adjustment VR:	VR919 (SET UP)
Adjustment Value:	2% ± 0.5% (30% as sync signal)

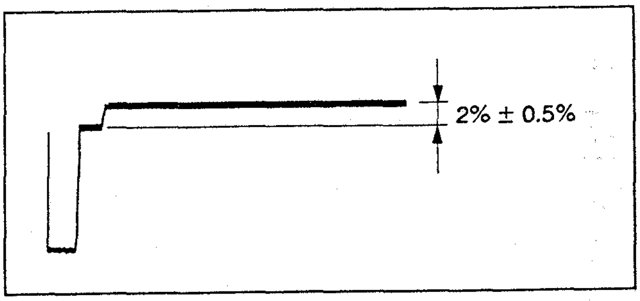


Fig. 1-9.

1-11. Y VIDEO LEVEL ADJUSTMENT

Subject: Gray scale
(standard picture frame)
Measurement Point: Video output
Measuring Equipment: Oscilloscope
Adjustment VR: VR918 (Y LEVEL)
Adjustment Value: 103% ± 2%
(30% as sync signal)

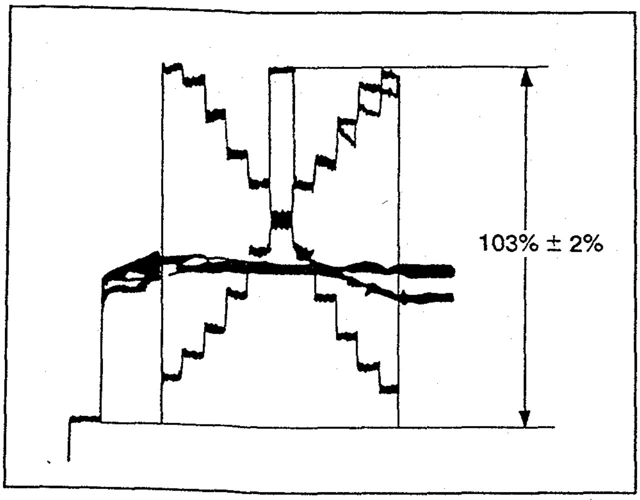


Fig. 1-10.

Note: Check the Y pedestal level adjustment after adjusting the Y video level.

1-12. PLL LOCK VOLTAGE ADJUSTMENT

Measurement Point: TP901 (PLL)
Measuring Equipment: Digital voltmeter or
Oscilloscope
Adjustment VR: CT911 (PLL)
Adjustment Value: DC2.4V ± 0.1V

1-13. BURST LEVEL ADJUSTMENT

Measurement Point: Video output
Measuring Equipment: Oscilloscope
(10 μsec/div, 50 mV/div)
Adjustment VR: VR917 (BST)
Adjustment Value: 300 mV ± 10 mV

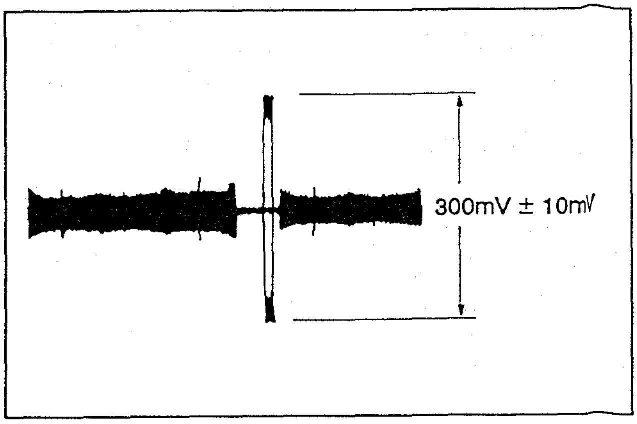


Fig. 1-11.

Note: It becomes easier to adjust either if the lens cap is attached, or if a non-colored subject like the gray scale chart is shot.

1-14. CHROMA BALANCE ADJUSTMENT

Subject: Color bar
(Standard picture frame)
Measurement Point: Video output
Measuring Equipment: Vectorscope
Adjustment VR: VR903 (C1-G)

Adjusting method:
Adjust so that the two luminance points which apply to each color overlaps. (Especially take red color into consideration when adjusting.)

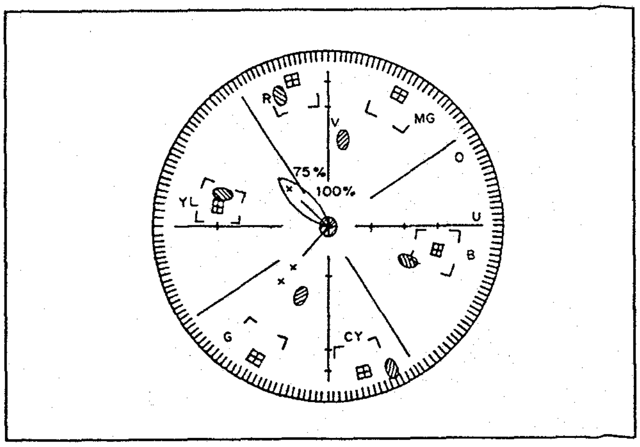


Fig. 1-12.

1-15. CHROMA HUE ADJUSTMENT

Subject:	Color bar
Measurement Point:	Video output
Measuring Equipment:	Vectorscope
Adjustment VR:	VR909 (R–Y HUE), VR911 (B–Y HUE), VR912 (B–Y GAIN), VR913 (R–Y GAIN)

Adjusting method:

1) Adjust the gain and the phase of the vectorscope so that the burst indicates "75%" on the vectorscope.
2) Use VR907 (R CONT), and VR906 (B CONT) and adjust so that the luminance point for the white on the vectorscope is positioned at the origin.
3) Adjust using the above four adjustment VRs so that the luminance points for the red and yellow on the vectorscope are positioned to the points shown in Fig. 1-13.

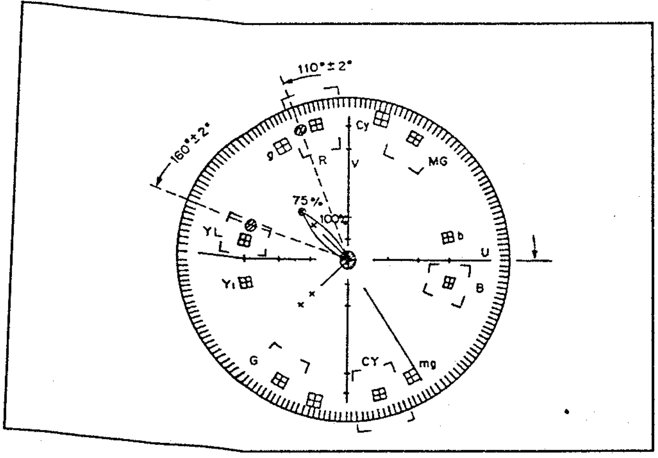


Fig. 1-13.

1-16. WHITE BALANCE ADJUSTMENT (1)

Subject:	Display on the 5100 °K viewer in full
Measurement Point:	Video output
Measuring Equipment:	Vectorscope (Set the gain so that the burst comes to the end of the vectorscope.)
Adjustment:	VR907 (R. CONT), VR906 (B. CONT)

Adjusting method:

1) Adjust VR907 and VR906 so that the center of the luminance point is within the center of the circle having the diameter of the "+" mark in the center of the vectorscope.

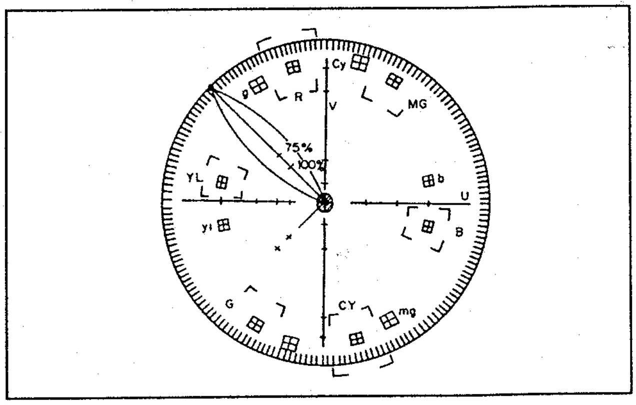


Fig. 1-14.

1-17. WHITE BALANCE ADJUSTMENT (2)

Subject: ① Display the 2800 °K halogen viewer in full.
or
② Attach two LBA8 filter to the lens of the color viewer 5100 °K.

Adjustment Point: VR947 (R.GAIN), VR948 (B.GAIN)

Video output

Measuring Equipment: Vectorscope (Set the gain so that the burst comes to the end of the vectorscope.)

Adjusting method :

1) Ground Pins ① and ② of CN944.
2) Adjust VR913 and VR912 so that the center of the luminance point is within the center of the circle having the diameter of the "+" mark in the center of the vectorscope.

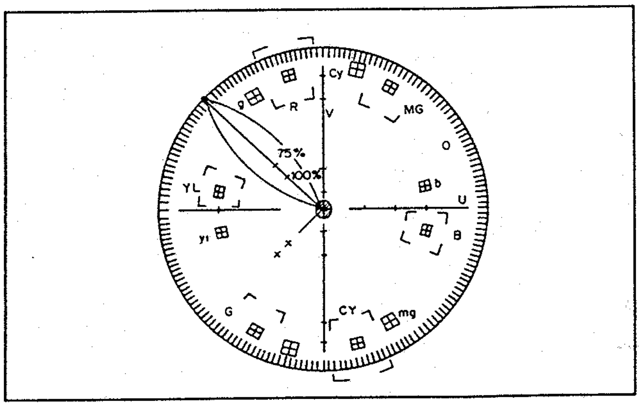


Fig. 1-15.

2. MECHANICAL ADJUSTMENTS

2-1. Cassette Mechanism (See Fig. 2-1.)

(1) Removal procedure

1) Remove screws 1 ① (2 pcs) then damper ②.
2) Remove Washers ③ (2 pcs) then pins ④ (2 pcs).
3) Slide rollers out ⑤ (2 pcs).

(2) Reinstallation procedure

1) Insert rollers ⑤ (2 pcs) into slots ⑥ (2 pcs) respectively in the reel chassis.
2) Inserts pins ④ (2 pcs) into holes ⑦ and slide Washer ③ (2 pcs) onto pins ④.
3) Attach damper ② and tighten screws ① (2 pcs).

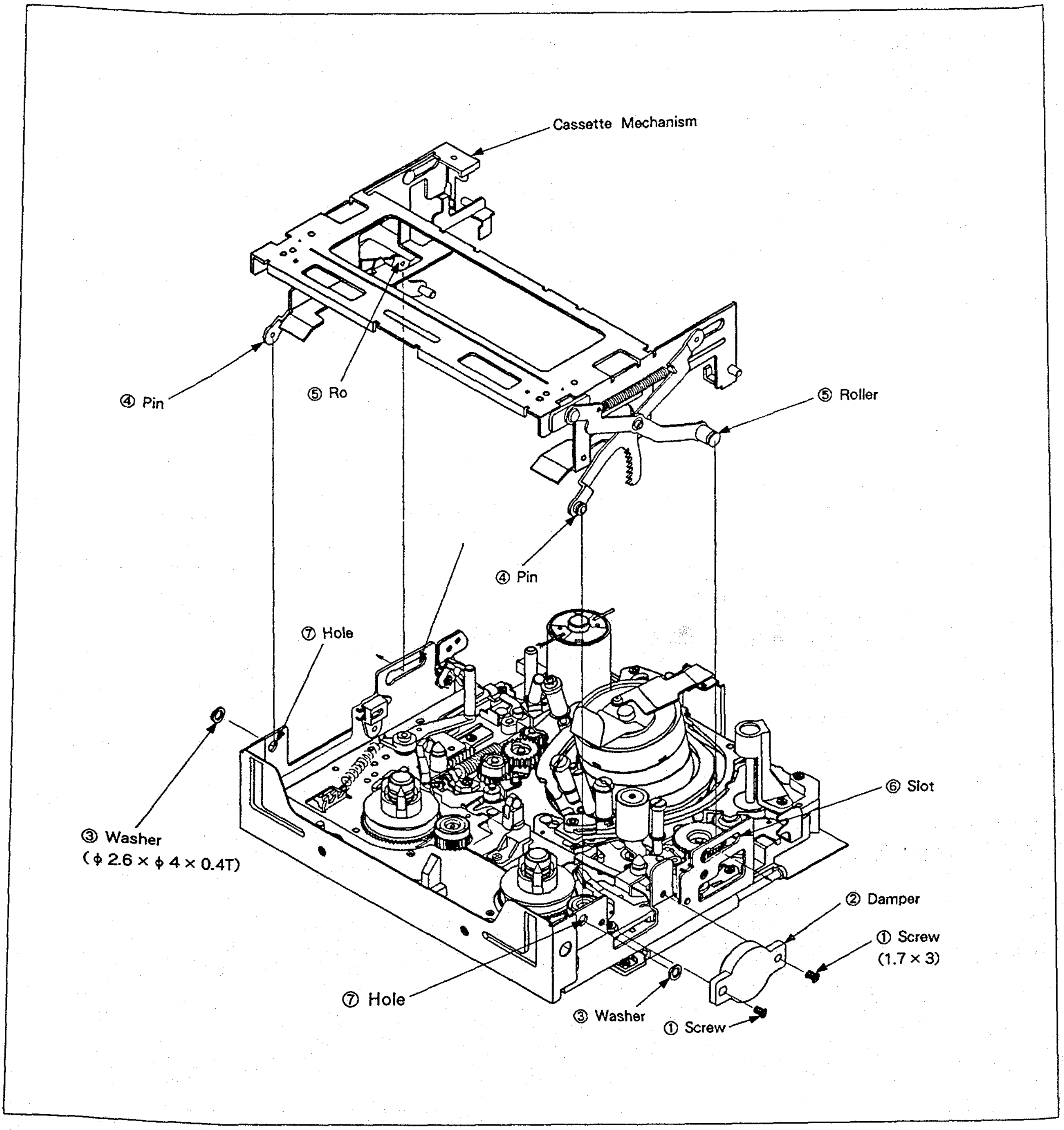

Cassette Mechanism
④ Pin
⑤ Ro
⑤ Roller
④ Pin
⑦ Hole
③ Washer
(ϕ 2.6 × ϕ 4 × 0.4T)
⑥ Slot
② Damper
① Screw
(1.7 × 3)
⑦ Hole
③ Washer
① Screw

Fig. 2-1.

2-2. Removing Tape Loaded Cassette (See Fig. 2-2.)

1) Open the PC board at the rear of the main chassis.

2) Referring to para 2-4., connect the mode selector to FPC PC board.
Note : One of boxed " ☐ " modes shown in Section 2-4. is selectable by a button. (See Fig. 2-5.)

3) In STAND BY mode move each tape guide, by a small amount at a time.

4) Using a cotton tipped applicator, rotate the rotor of capstan motor ① in the direction of the arrow to wind the tape loop around a cassette reel. (See Fig. 2-3.)

5) Repeat steps 2) and 3) until all the tape is wound up. Select EJECT mode and remove the cassette.

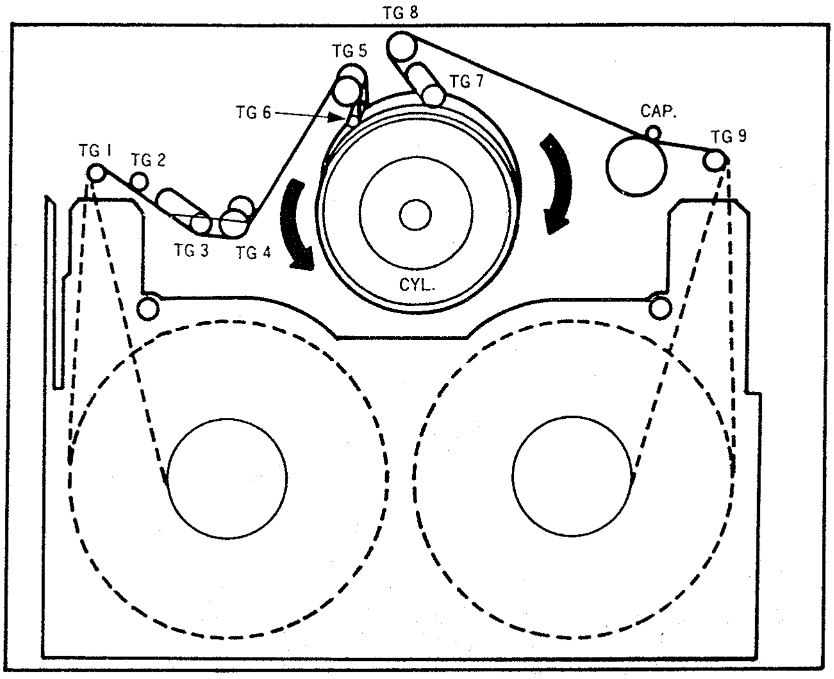

TG 8
TG 5
TG 7
TG 6
CAP.
TG 9
TG 1
TG 2
TG 3
TG 4
CYL.

Fig. 2-2.

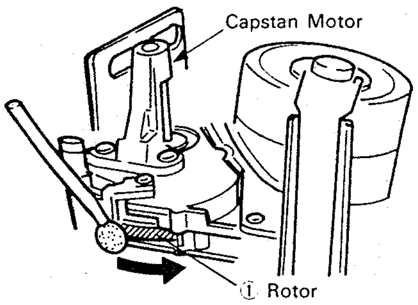

Capstan Motor
① Rotor

Fig. 2-3.

2–3. Operating Detached Cassette Mechanism

(1) Loading a tape (See Fig. 2–4.)

1) Supply power to the mechanism with the cabinet and camera disconnected to activate the mechanical deck.
2) Cover tape end sensors ① (2 pcs) with black tape ②.
3) Pressing down pins on push SW ③ (ON), secure the pins with adhesive tape ④.
4) Press cassette SW ⑤ in the direction of the arrow and the mechanism enters the loading mode.

(2) Putting into recording mode.

1) After completing steps in (1) "Loading a tape", turn the power SW on.
2) Short together TP301 and TP302 of SY1 PC board.
3) Turn REC SW on.

(3) Ejecting cassette.

1) Turn EJECT SW on.

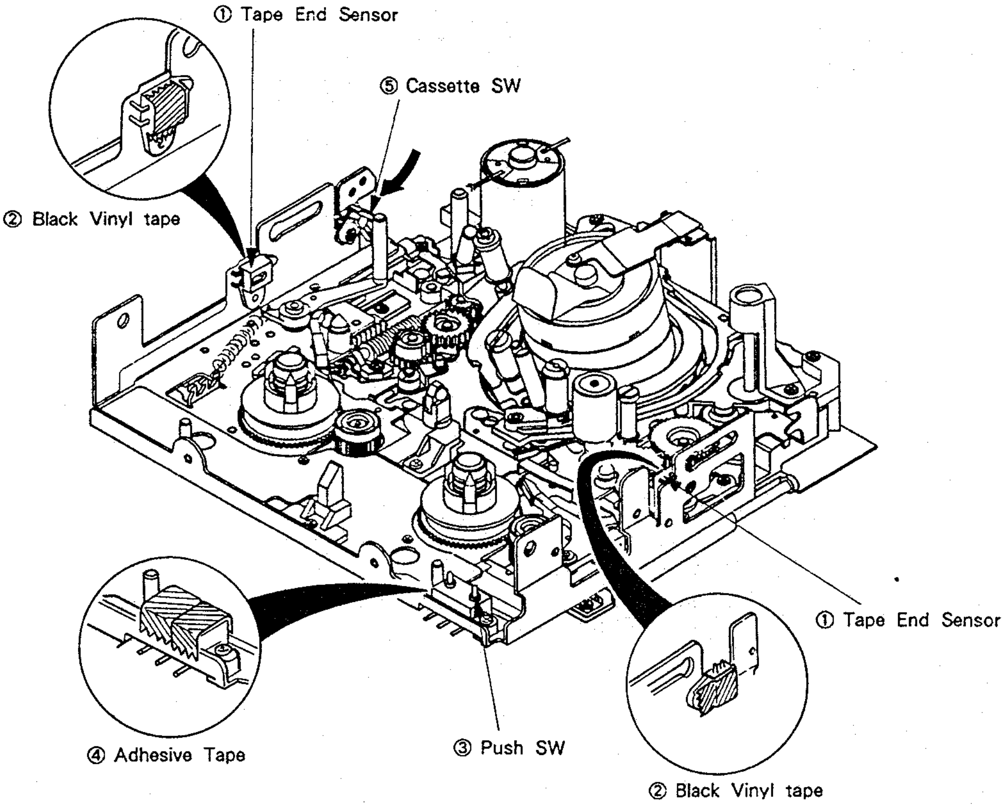

① Tape End Sensor
⑤ Cassette SW
② Black Vinyl tape
① Tape End Sensor
④ Adhesive Tape
③ Push SW
② Black Vinyl tape

Fig. 2–4.

2–4. Connecting & Operating Mode Selector

This mechanism operates in one of four modes which should be selected as required in a removal step.

EJECT ↔ STAND BY ↔ READY ↔ REC

1) EJECT mode
   Simulates a condition under which unloading SW is being pressed and the motor is in stop mode (motor lock).
2) STANDBY mode
   Simulates a condition under which the loading SW is being tapped repeatedly at shorter intervals in EJECT mode. S and T shuttles (TG5,8) begin to move.
3) REC mode
   Simulates a condition under which the loading SW is being pressed and the motor is in stop mode (motor lock).

Note :
READY mode is similar to REC mode except that the pinch roller is disengaged : Select REC mode before entering the READY mode.

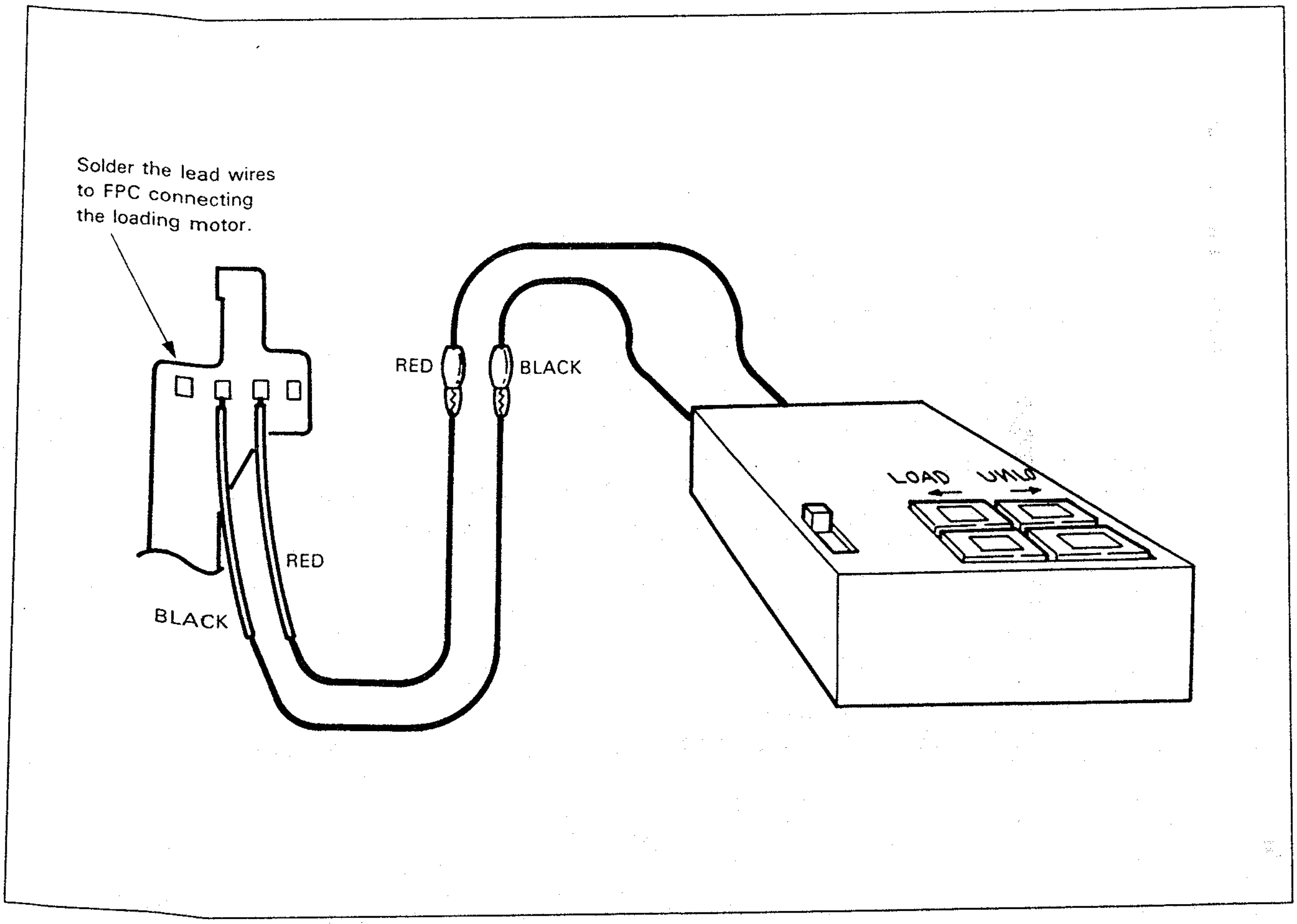

Solder the lead wires to FPC connecting the loading motor.
RED
BLACK
RED
BLACK
LOAD
UNLO

Fig. 2–5.

2–5. Periodic Check and Maintenance

- To keep the set at top performance with satisfactory functioning parts including the tape, perform the following maintenance and check steps periodically. Also follow the following procedure after any repair work regardless of operating time

2–5–1. Cleaning cylinder

1) Lightly pressing a chamois leather (Ref. No. J–2) dampened with cleaning fluid (Ref. No. J–1), rotate the upper cylinder slowly in a counter-clockwise direction using your finger.

Notes : Do not turn the motor. Do not rotate the cylinder clockwise. Do not move the chamois leather vertically across the headtip. The headtip may be damaged. Follow the procedure described above.

2–5–2. Cleaning tape transporting system (See Fig. 2–6.)

1) In EJECT mode, clean tape transport system (TG-1, 2, 3, 4, 5, 6, 7, 8, 9, pinch roller and capstan shaft) with chamois leather be in dampened with a cleaning fluid.

Note : Be sure not to let the chamois leather be in contact with any oil or grease of the links.

2–5–3. Cleaning driving system

1) Clean the driving system (reel base top) with a cloth dampened with a cleaning fluid.

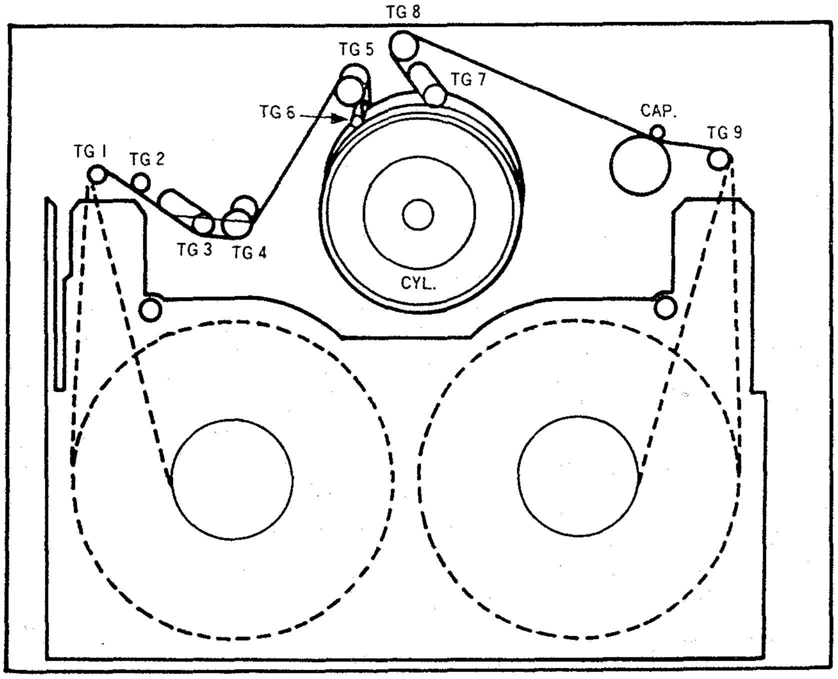


Fig. 2–6.

2–5–4. Items to be checked periodically

Maintenance and check		Operating time (Hours)										Remarks
		500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	
	Cleaning of tape running faces	○	○	○	○	○	○	○	○	○	○	Keep oil-free
	Cleaning and degaussing of cylinder assy	○	○	○	○	○	○	○	○	○	○	Keep oil-free
Driving system	Capstan shaft	–	◎	–	◎	–	◎	–	◎	–	◎	Do not allow oil to be in contact with surfaces of the tape running system.
	Loading motor	–	☆	–	☆	–	☆	–	☆	–	☆	
Performance verification	Abnormal sound	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	–	☆	–	☆	–	☆	–	☆	–	☆	
	Brakings	–	☆	–	☆	–	☆	–	☆	–	☆	
	FWD & RVS torque measurement	–	☆	–	☆	–	☆	–	☆	–	☆	

○ Cleaning ◎ Lubrication ☆ Verification

Note : During overhaul, replace parts as required referring to the above table.

Notes : Oil considerations

- Do not apply oils other than those specified. Oil with viscosity different from the standard may cause problems.
  COSMO OIL PASS 150
  (Commercially available)
- Use only clean oil for bearings. Oil containing dust may lead to frozen shaft or worn shaft.
- A drop of oil is the amount of oil collecting on a 2mm dia rod tip as shown in Fig. 2–7.

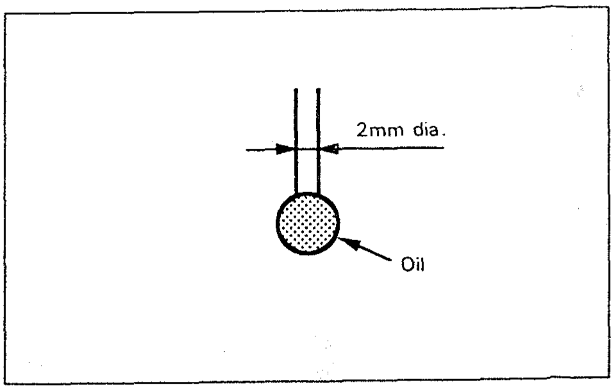


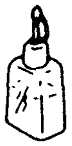
Fig. 2–7.

2−5−5. Service jig list

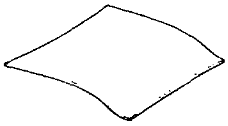
Ref. No.	Name	Part Code	Mark Engraved on Tool	Application, etc.
J − 1	Cleaning fluid	Y-2031-001-0	—	
J − 2	Chamois leather	2-034-697-00	—	
J − 3	Head demagnetizer	Commercially available	—	
J − 4	Dental Mirror Spare Mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape Path
J − 5	Alignment Tape (WR5-1CP)	8-967-995-07		Tape Path
J − 6	Dial Tension Gauge	J-6080-827-A		Torque Measurements
J − 7	Tension Measuring Reel	J-6080-831-A		With φ 30 tape
J − 8	FWD, RVS Takeup Torque Cassette	J-6080-824-A	GD-2086	
J − 9	Mode Selector	J-6080-825-A		General
J − 10	Shift Track Replacement Connector	VJ8-0098		Tape Path
J − 11	FPC Removal Tool	VJ8-0059		

Other instruments required
- ●Oscilloscope
- ●Analog tester (20KΩ)

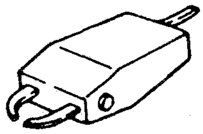
J−1



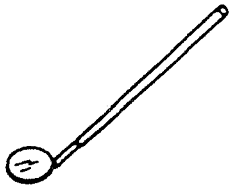
J−2



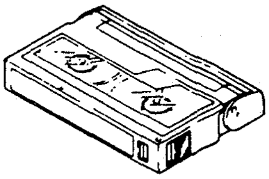
J−3



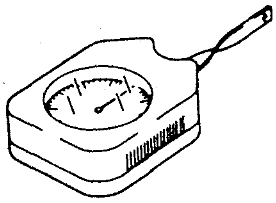
J−4



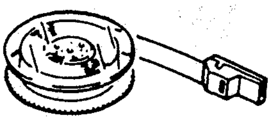
J−5



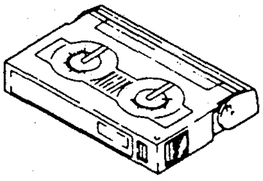
J−6



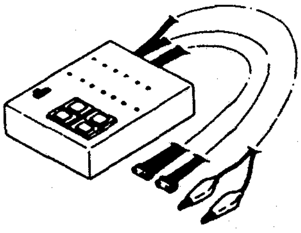
J−7



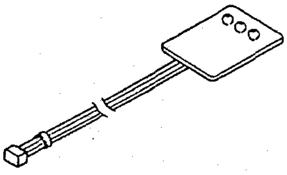
J−8



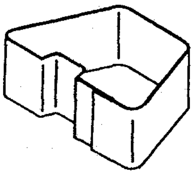
J−9



J−10



J−11



2-6. Checking, Adjusting and Replacing Mechanical Section

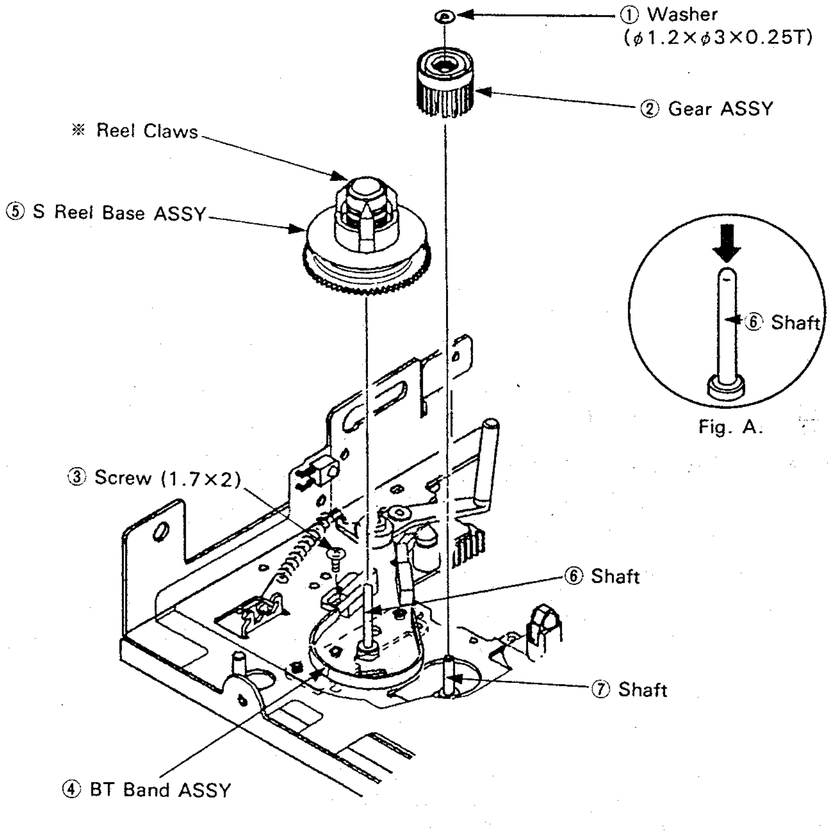
2-6-1. S reel base ASSY (See Fig. 2-8.)

(1) Removal procedure
1) Remove the cassette mechanism referring to Section 2-1.
2) Remove Washer ① then gear ASSY ②.
3) Remove screw ③ and release BT band ASSY ④ at this end.
4) Remove S reel base ASSY ⑤.

Note : Remove S reel base ASSY ⑤ on claws ※. (The same applies during reinstallation.)

(2) Reinstallation procedure
1) Apply 1/3 ~ 1/2 drop of Swafluid oil onto the shaft ⑥ shown by the arrow in Fig. A.
2) Mount S reel base ASSY ⑤ on shaft ⑥.
3) Secure BT band ASSY ④ with screw ③.
4) Mount gear ASSY ② on shaft ⑦ and tighten Washer ①.
5) Reinstall the cassette mechanism referring to Section 2-1.

Notes : Check the reel base height referring to para 2-6-18.
Adjust BT lever position referring to para 2-6-20.
Adjust FWD back tension referring to para 2-6-21.



① Washer
(ϕ1.2×ϕ3×0.25T)
② Gear ASSY
※ Reel Claws
⑤ S Reel Base ASSY
⑥ Shaft
Fig. A.
③ Screw (1.7×2)
⑥ Shaft
⑦ Shaft
④ BT Band ASSY

Fig. 2-8.

2-6-2. T reel base ASSY (See Fig. 2-9.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1.
2) Remove tension coil spring ①.
3) Remove Washer ② and soft brake ASSY ③.
4) Remove Washer ④ and gear ASSY ⑤.
5) Remove T reel base ASSY ⑥.

Notes : 1. Remove T reel ASSY ⑥ on claws ※. (The same applies during reinstallation.)
2. Rotating slightly soft brake ASSY ③ clockwise (without removing) allows easier removal of T reel ASSY ⑥.

(2) Reinstallation procedure

1) Apply 1/3 ~ 1/2 drop of Swafuild oil onto shaft ⑦ as shown by the arrows in Fig. A.
2) Mount T reel base ASSY ⑤ on the shaft ⑦.
3) Mount gear ASSY ⑤ on the shaft ⑧ and secure with Washer ④.
4) Engage soft brake ASSY ③ with shaft ⑨ and slot ⑩ and secure them with Washer ②.
5) Referring to Fig. B, attach tension coil spring ①.
6) Referring to Section 2-1, reinstall the cassette mechanism.

Note : Check reel base height referring to para 2-6-18.

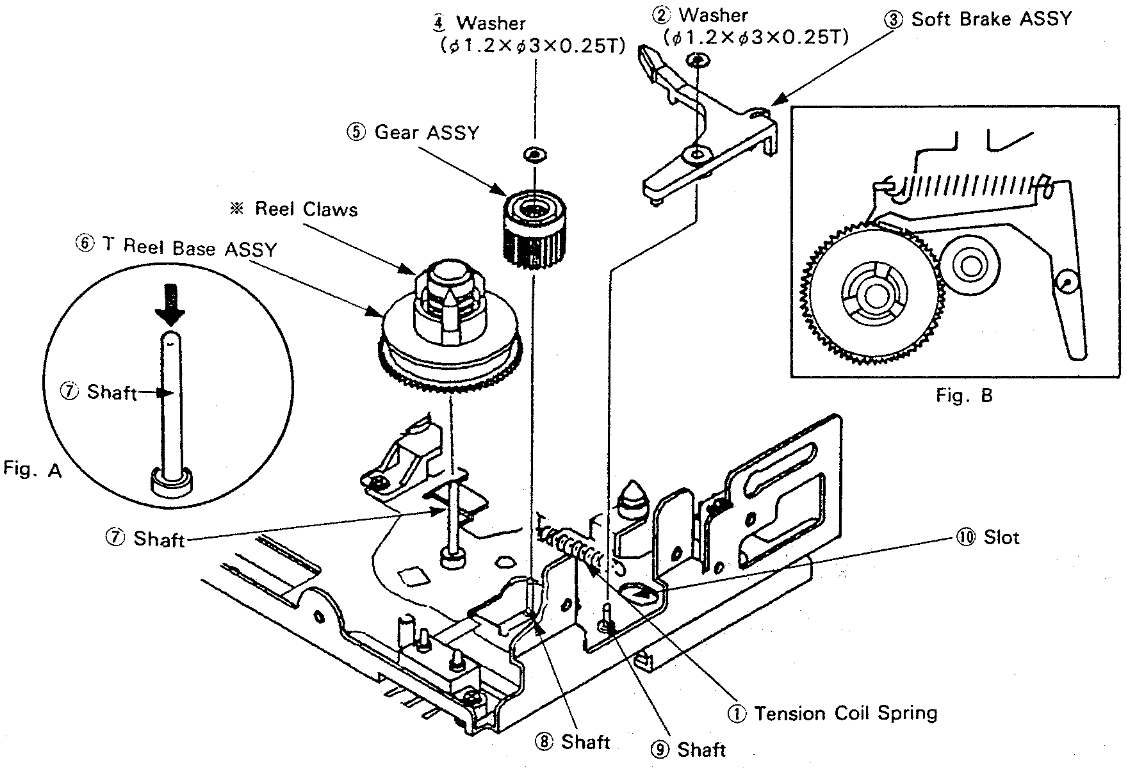

④ Washer
(ϕ1.2×ϕ3×0.25T)
② Washer
(ϕ1.2×ϕ3×0.25T)
③ Soft Brake ASSY
⑤ Gear ASSY
※ Reel Claws
⑥ T Reel Base ASSY
⑦ Shaft
Fig. A
⑦ Shaft
Fig. B
⑩ Slot
① Tension Coil Spring
⑧ Shaft
⑨ Shaft

Fig. 2-9.

2-6-3. Pinch roller & lever ASSY (See Fig. 2-10.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1.

2) Remove screw ① then sensor bracket ②.

3) Remove washer ③ then pinch lever ASSY ④ and pull-out guide ASSY ⑤.

Note: Do not touch roller ※.

(2) Reinstallation procedure

1) Mount pull-out guide ASSY ⑤ on the shaft ⑦.

2) Insert pin A of pinch lever ASSY ④ into hole B of the pinch pressure slider ⑦ and slide hole C of pinch lever ASSY ④ into the pin D of pull-out guide ASSY ⑤. At this time, also insert pinch lever ASSY ④ into shaft ⑧. Secure them with washer ③.

3) Install sensor bracket ② and tighten screw ①.

4) Reinstall the cassette mechanism, referring to Section 2-1.

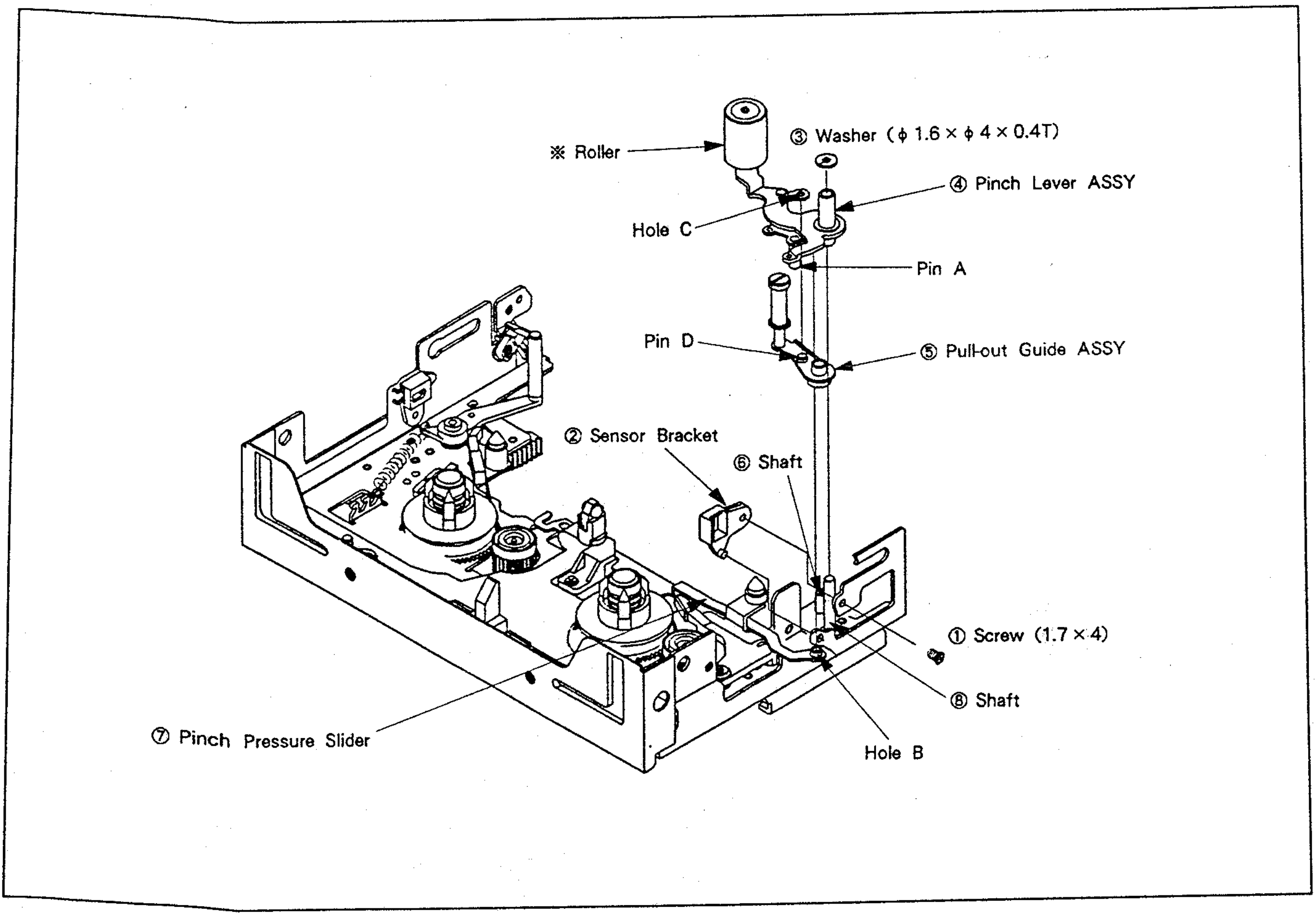

※ Roller
③ Washer (ϕ 1.6 × ϕ 4 × 0.4T)
④ Pinch Lever ASSY
Hole C
Pin A
Pin D
⑤ Pull-out Guide ASSY
② Sensor Bracket
⑥ Shaft
① Screw (1.7 × 4)
⑧ Shaft
⑦ Pinch Pressure Slider
Hole B

Fig. 2-10.

2−6−4. Back tension lever ASSY

(1) Removal procedure (See Fig. 2−11,12.)

1) Remove the cassette mechanism referring to Section 2−1. (EJECT mode.)
2) Remove screw ⑫ in Fig. 2−12 and release BT band ASSY ⑥ at this end.
3) Remove tension coil spring ② on BT lever ASSY ①.
4) Remove screw ③. Slide slightly the slide bearing ④ in the direction of the arrow and separate the reel chassis from the main chassis. (Flexible PCB can be left attached.)
5) Turn the reel chassis over and remove Washer ⑤ at the back of the chassis then remove BT lever ASSY ①.

Note : Do not handle BT band ASSY ⑥ with hand. Be careful not to bend the band.

(2) Reinstallation procedure (See Fig. 2−12.)

1) Insert pin ⑧ of BT lever ASSY ① into hole ⑦ of BT band ASSY ⑥.
2) Insert pin ⑨ into shaft ⑩ of the reel chassis and pin ⑧ into slot ⑪, respectively.
3) Secure pin ⑨ of BT lever ASSY ① with Washer ⑤ on the rear of the chassis.
4) Secure BT band ASSY ⑥ with screw ⑫.
5) Mount the reel chassis to the main chassis, referring to para 2−6−6.
6) Install tesnsion coil spring ②, referring to Fig. 2−11.
7) Install the cassette mechanism, referring to Section 2−1.

Note : Do not handle BT band ASSY ⑥ with hand. Be careful not to bend the band.

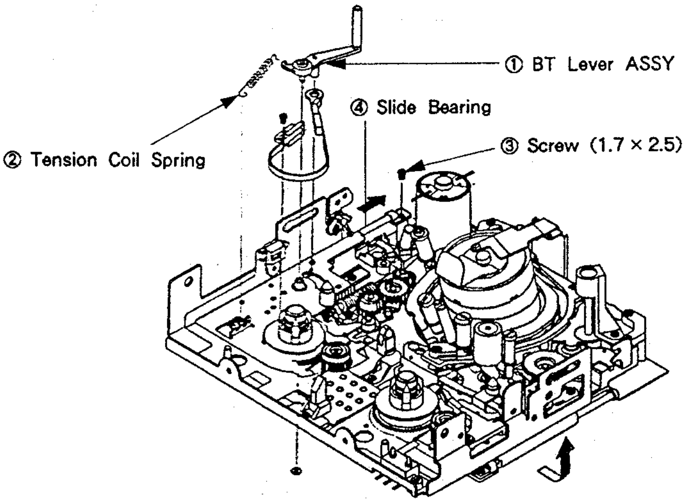

① BT Lever ASSY
④ Slide Bearing
③ Screw (1.7 × 2.5)
② Tension Coil Spring

Fig. 2−11.

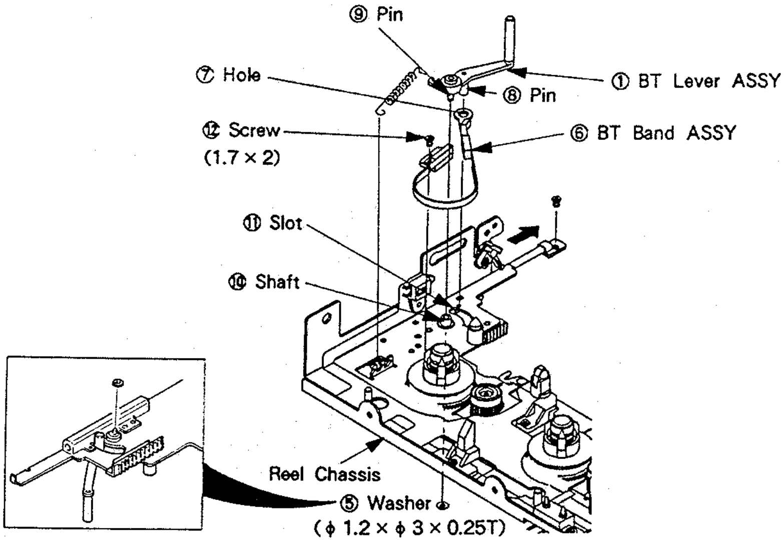

⑨ Pin
⑦ Hole
① BT Lever ASSY
⑧ Pin
⑫ Screw (1.7 × 2)
⑥ BT Band ASSY
⑪ Slot
⑩ Shaft
Reel Chassis
⑤ Washer
(ϕ 1.2 × ϕ 3 × 0.25T)

Fig. 2−12.

2–6–5. Idler gear ASSY (See Fig. 2–13.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2–1. (EJECT mode.)
2) Separate the reel chassis from the main chassis, referring to para 2–6–4, step 4).
3) Remove Washer ①. Remove idler gear ASSY ② and gear ③.

(2) Reinstallation procedure

1) Mount shaft ④ on gear ③. Mount boss Ⓐ of idler gear ASSY ② onto shaft ④ and boss Ⓑ into slot ⑤. Secure them with Washer ①.
2) Install the reel chassis on the main chassis, referring to para 2–6–6.
3) Mount the cassette mechanism, referring to Section 2–1.

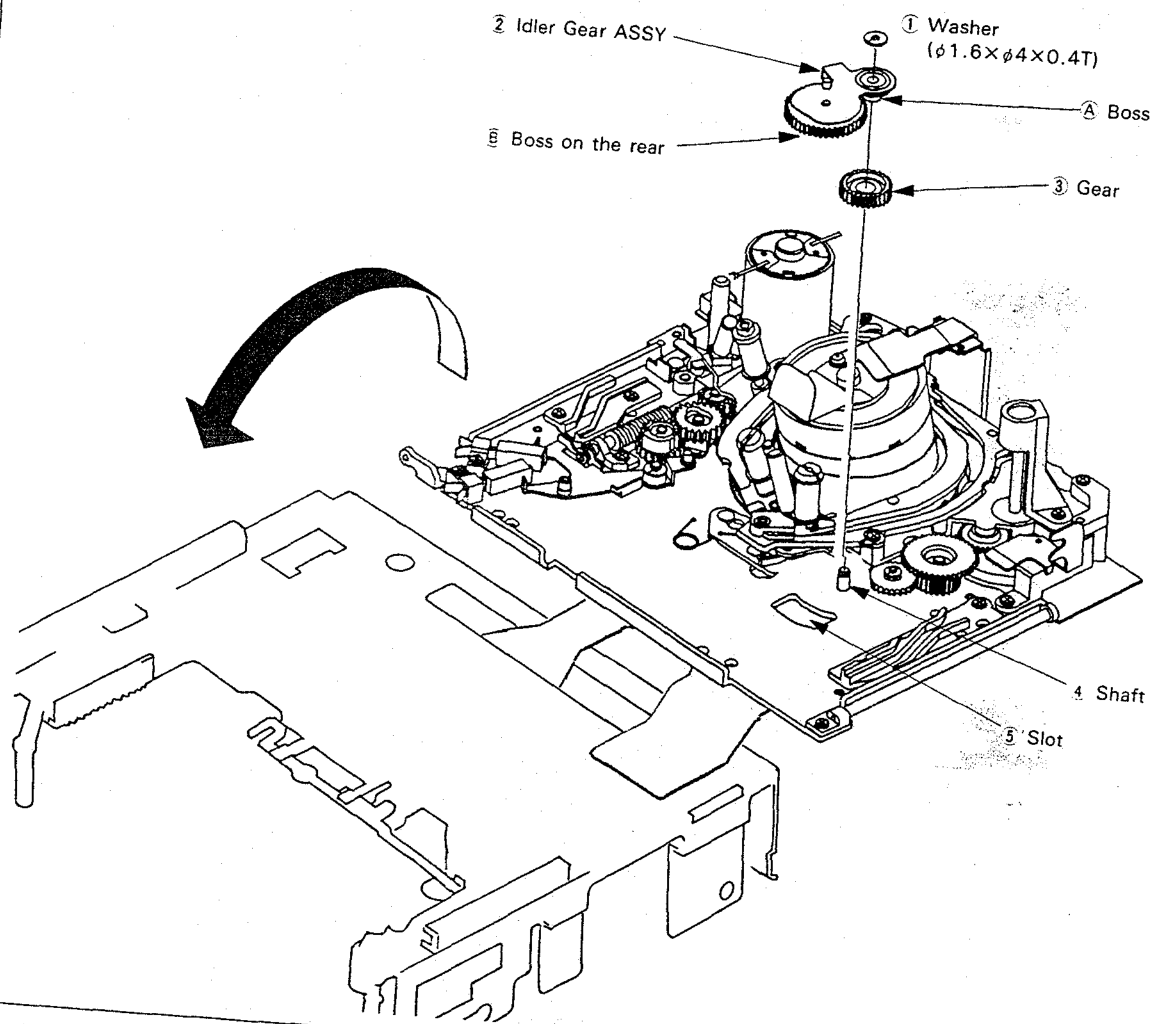

② Idler Gear ASSY
① Washer (φ1.6×φ4×0.4T)
Ⓐ Boss
Ⓑ Boss on the rear
③ Gear
④ Shaft
⑤ Slot

Fig. 2–13.

2-6-6. Phase matching during installation of reel chassis on main chassis (See Figs. 2-14 and 2-15.)

1) Select STAND BY mode.
2) Position the mode lever ① so that its "bent" part shown in Fig. 2-14 is parallel with a line from T reel shaft to S reel shaft.
3) Mesh the first tooth of the rack ② of the reel chassis with the same groove of worm gear with which the third tooth of gear A ③ (lower) engages.
4) While meshing reel support bracket ④ with support shaft ⑤, engage cam followers of BT lever and TG9 lever with the cam of main chassis. (See Fig. 2-15.)
5) Insert support shaft ⑥ into reel chassis support bracket ⑦ and secure them with screw ⑧.

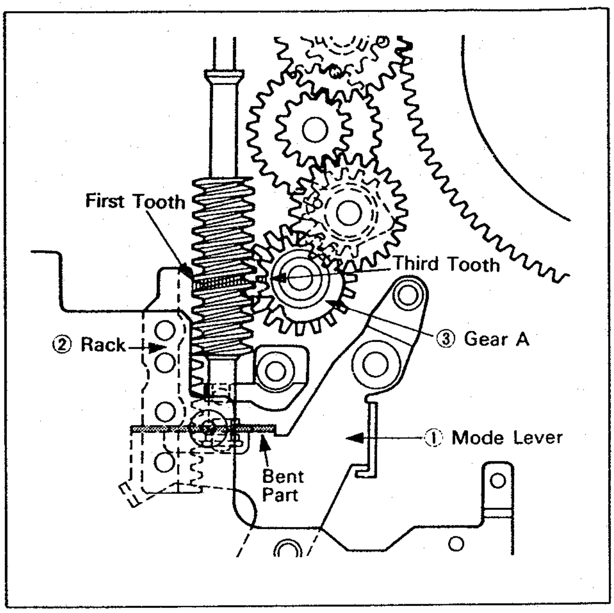

First Tooth
Third Tooth
② Rack
③ Gear A
① Mode Lever
Bent Part

Fig. 2-14.

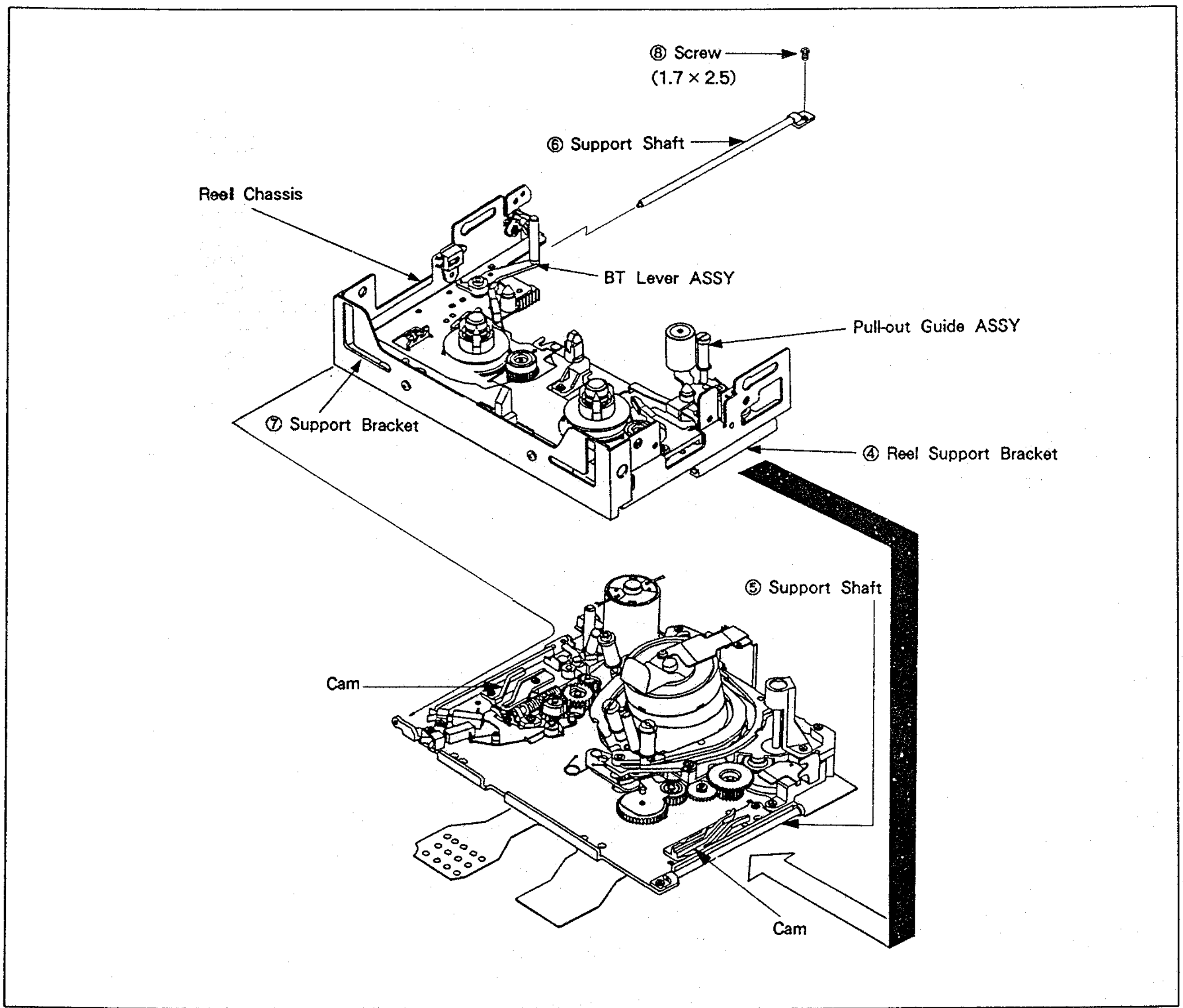

⑧ Screw
(1.7 × 2.5)
⑥ Support Shaft
Reel Chassis
BT Lever ASSY
Pull-out Guide ASSY
⑦ Support Bracket
④ Reel Support Bracket
⑤ Support Shaft
Cam
Cam

Fig. 2-15.

2−6−7. Pinch pressure slider (See Fig. 2−16.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2−1. (EJECT mode.)
2) Remove pinch lever ASSY ① and pull-out guide ASSY ②, referring to para 2−6−3.
3) Slide pinch pressure slider ③ in the direction of the arrow and remove pin ⑤ from slot ④.

(2) Reinstallation procedure

1) Attach pinch pressure slider ③ as shown in Fig. A.
2) Referring to para 2−6−3, attach pinch lever ASSY ① and pull-out guide ASSY ②.
3) Referring to Section 2−1, reinstall the cassette mechanism.

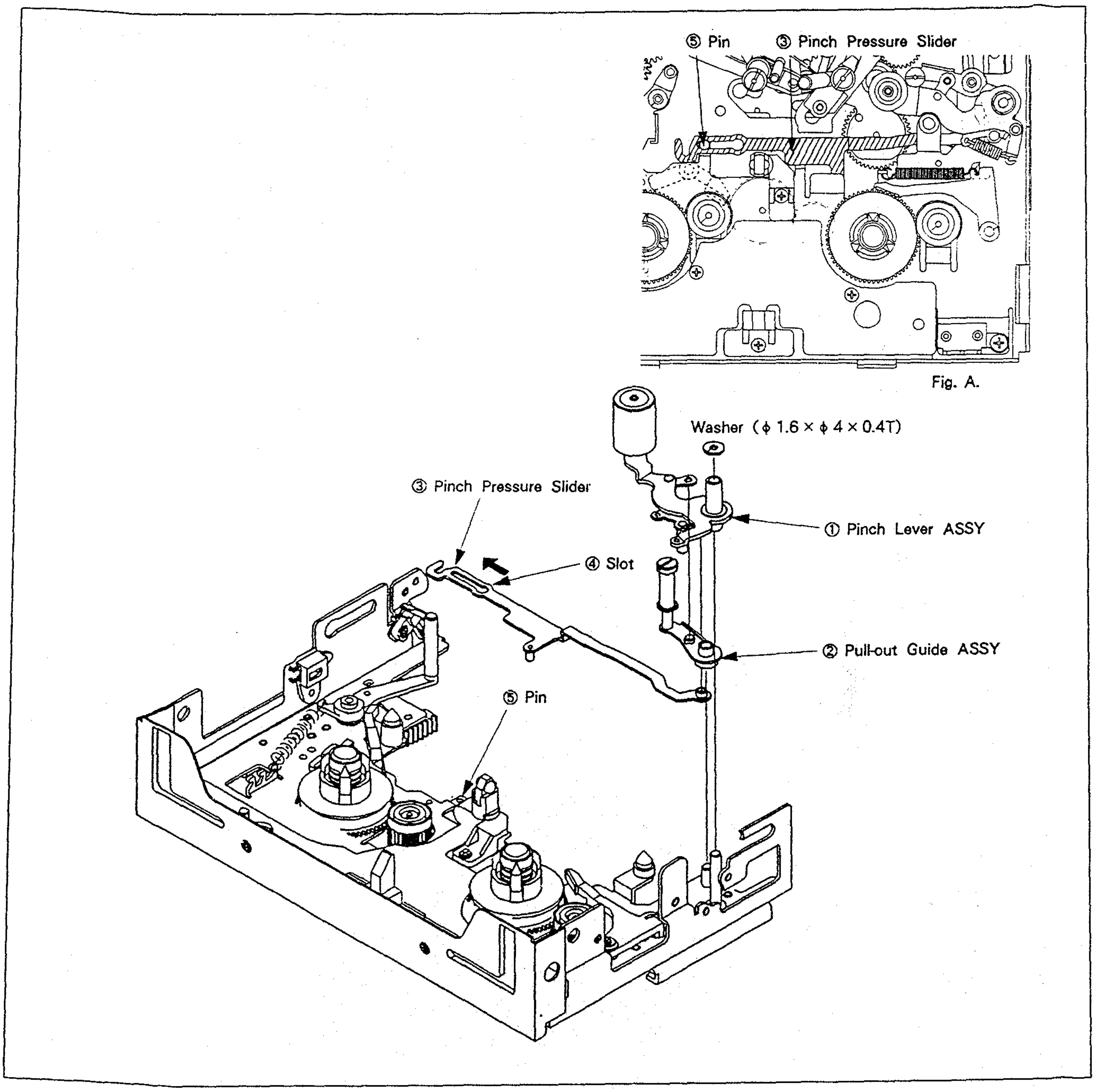

⑤ Pin
③ Pinch Pressure Slider
Fig. A.
Washer (ϕ 1.6 × ϕ 4 × 0.4T)
③ Pinch Pressure Slider
④ Slot
① Pinch Lever ASSY
② Pull-out Guide ASSY
⑤ Pin

Fig. 2−16.

2-6-8. S shuttle ASSY (See Fig. 2-17.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Referring to para 2-6-15, remove the cylinder base.
3) Referring to para 2-6-14, remove TG4.
4) Remove screws ②, ③ and ④ that secur rail ① and separate it from the cylinder base.
5) Remove pin ⑥ S shuttle ASSY ⑤, plate ⑦ and link ⑧ from the rail ①.

(2) Reinstallation procedure

1) Insert S shuttle ASSY ⑤ into rail ① and turn the assembly over.
2) Referring to Fig. A, engage plate ⑦ with boss ⑨ of S shuttle ASSY⑤, place link ⑧ on plate ⑦ and secure them with pin ⑥.
3) Place rail ① on the cylinder base and secure it with screws ②, ③ and ④.
4) Referring to para 2-6-14, attach TG4 to shaft ⑩.
5) Verify smoothness of the movement of S shuttle ASSY ⑤. Referring to para 2-6-15, reinstall the cylinder base.
6) Referring to Section 2-1, reinstall the cassette mechanism.

Note : Be carefull not to scratch the cylinder with a screw driver during the following steps.

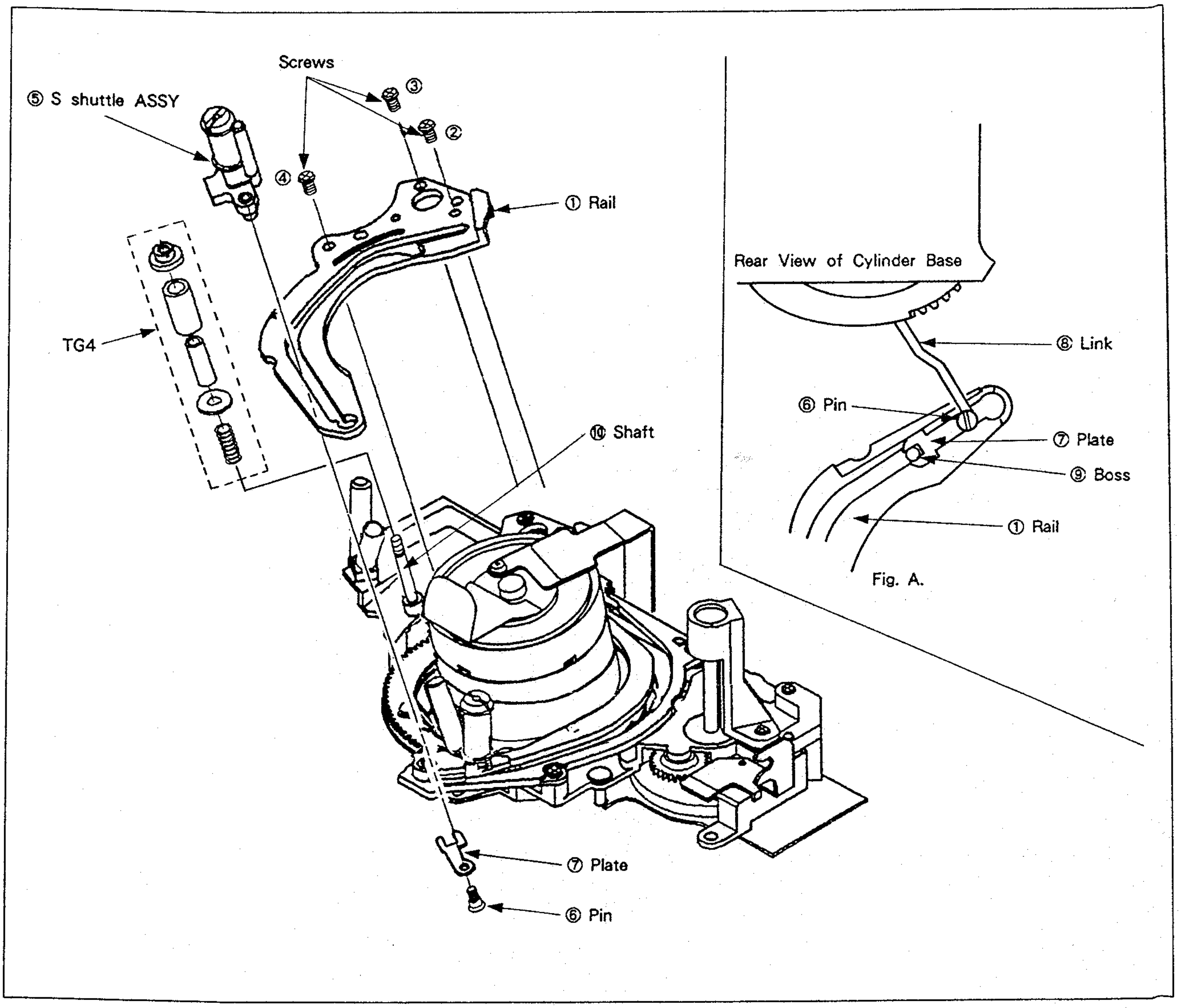

Screws
③
②
④
⑤ S shuttle ASSY
① Rail
TG4
⑩ Shaft
Rear View of Cylinder Base
⑧ Link
⑥ Pin
⑦ Plate
⑨ Boss
① Rail
Fig. A.
⑦ Plate
⑥ Pin

Fig. 2-17.

2-6-9. T shuttle ASSY (See Fig. 2-18.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Referring to para 2-6-15, remove the cylinder base.
3) Referring to Fig. A, remove screw ② then plate ③, link ④ and T shuttle ASSY ① from the cylinder base.

(2) Reinstallation procedure

1) Insert T shuttle ASSY ① into rail ⑤ and turn the assembly over.
2) Referring to Fig. A, engage plate ③ with boss ⑥ ; place link ④ on T shuttle ASSY ① and tighten screw ②.
3) Verify the smoothness of movement of T shuttle ASSY ①. Referring to para 2-6- 15, reinstall the cylinder base.
4) Referring to Section 2-1, reinstall the cassette mechanism.

Note : Be carefull not to scratch the cylinder with a screw driver during the following procedure.

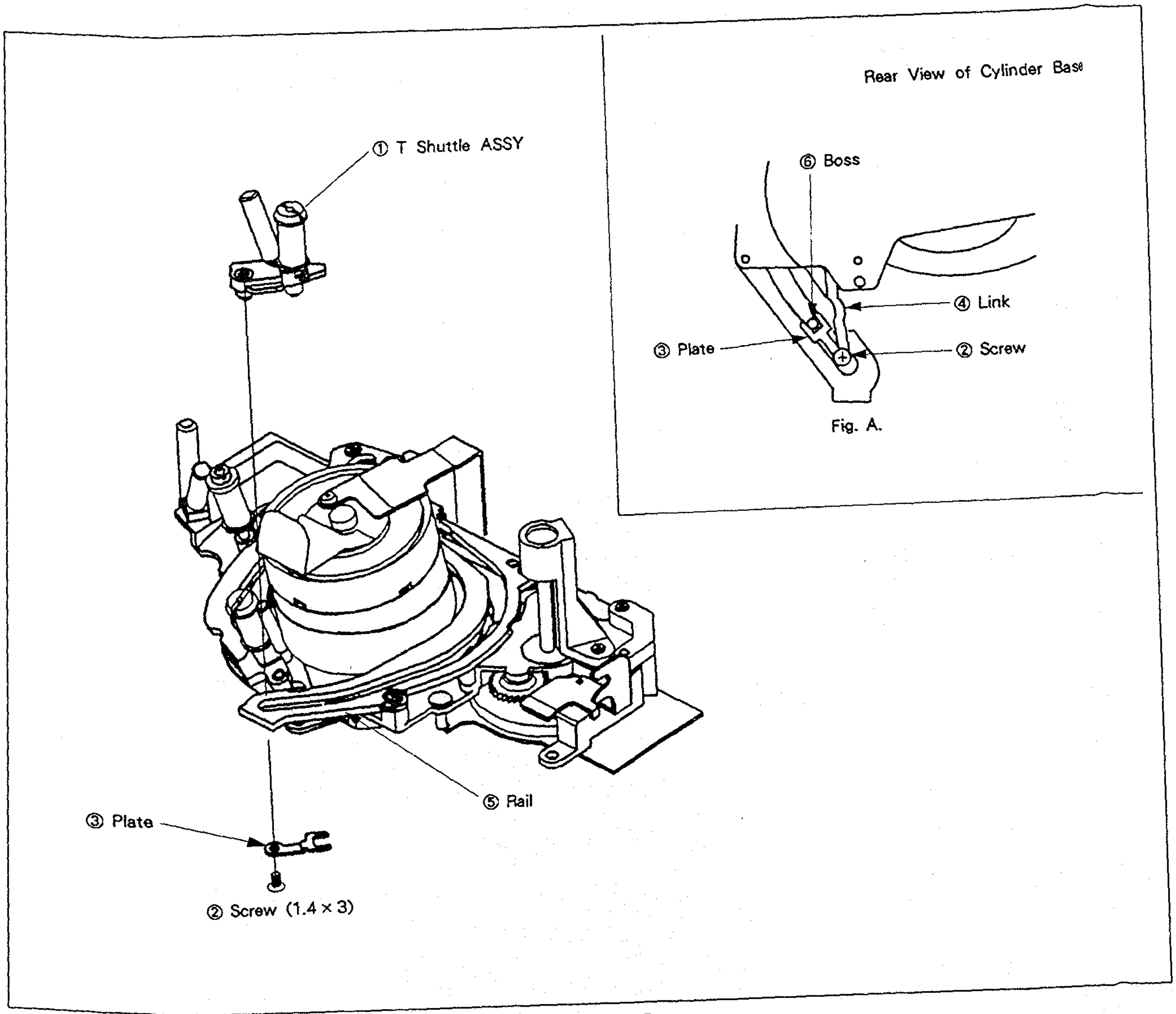

Rear View of Cylinder Base
① T Shuttle ASSY
⑥ Boss
④ Link
③ Plate
② Screw
Fig. A.
⑤ Rail
③ Plate
② Screw (1.4 × 3)

Fig. 2-18.

2-6-10. Loading ring ASSY T and S (See Fig. 2-19.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Referring to para 2-6-15, remove the cylinder base.
3) Referring to para 2-6-17, remove the cylinder.
4) Referring to para 2-6-8, remove S shuttle ASSY and S rail.
5) Referring to para 2-6-9, remove T shuttle ASSY.
6) Remove sleeve ① and screw ② then T rail ③.
7) Remove E ring ④, roller ⑤, S loading ring ASSY ⑥, roller ⑦, T loading ring ASSY ⑧, E ring ⑨, roller ⑩, E ring ⑪, roller ⑫, and roller ⑬ in this order.

(2) Reinstallation procedure

1) Install roller ⑬, roller ⑫, E ring ⑪, roller ⑩, E ring ⑨, T loading ring ASSY ⑧, roller ⑦, S loading ring ASSY ⑥, roller ⑤, E ring ④ in this order.
2) Place T rail ③ on shaft ⑭ ; tighten screws ② (2 pcs) and fix sleeve ①.
3) Referring to para 2-6-9, replace T shuttle ASSY.
4) Referring to para 2-6-8, replace S shuttle ASSY and S rail.
5) Referring to para 2-6-17, replace the cylinder.
6) Referring to para 2-6-15, replace the cylinder base.
7) Referring to Section 2-1, replace the cassette mechanism.

Note : Before attaching T rail, verify the smoothness of movement of S and T loading ring ASSY's ⑥ and⑧ and rollers ⑤, ⑦, ⑩, ⑫ and ⑬.

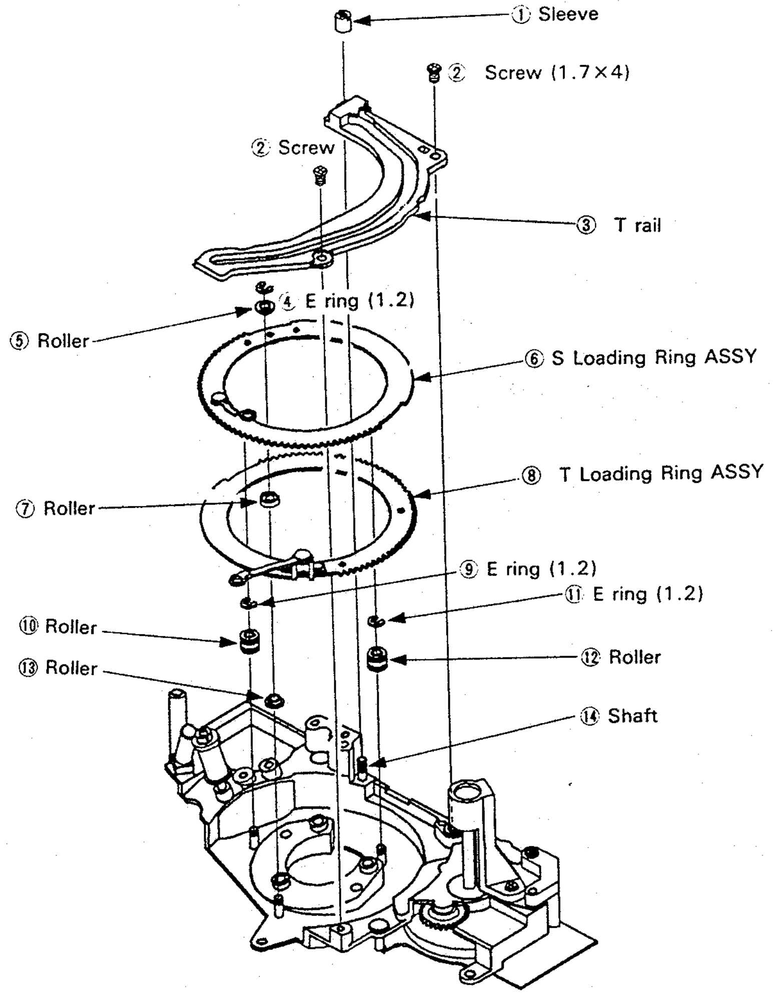

① Sleeve
② Screw (1.7×4)
② Screw
③ T rail
④ E ring (1.2)
⑤ Roller
⑥ S Loading Ring ASSY
⑧ T Loading Ring ASSY
⑦ Roller
⑨ E ring (1.2)
⑪ E ring (1.2)
⑩ Roller
⑬ Roller
⑫ Roller
⑭ Shaft

Fig. 2-19.

2-6-11. Flexible PC board (Reel chassis) (See Fig. 2-20)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Remove the blind covering flexible PC board ①.
3) Unsolder ② on flexible PC board ① (Following the procedure described in the next page : Soldering Considerations. Use the JIG VJ8-0059.)
   Also unsolder cassette SW ③ held by the reel chassis.
4) Referring to para 2-6-4, remove the reel chassis from the main chassis.
   Remove the flexible PC board ⑥ that is soldered at ②.
5) Remove screwed tape end sensor brackets ④ and ⑤.
6) Remove screws securing push SW ⑦ and tape end sensor bracket ASSY ⑧ ; remove flexible PC board ①.

(2) Reinstallation procedure (After replacing parts)

1) Curl flexible PC board ⑨ as shown in Fig. A and solder the parts the PC board.
2) Peel off the back tape of the PC board and attach it across reel shafts ⑩ and ⑪.
3) Screw tape end sensor brackets ④ and ⑤, and tape end sensor bracket ASSY ⑧.
4) Insert dimples and dowels into the back of SW ⑦ and screw it.
5) Solder the cassette SW as shown in Fig. B.
6) Place flexible PC board ⑥ on flexible PC board ①. Using the JIG VJ8-0059 (see Soldering Considerations on the next page), apply solder generously onto the PC board.
7) Referring to para 2-6-6, attach the reel chassis to the main chassis.
8) Referring to Section 2-1, install the cassette mechanism.

Note : Perform soldering in 5 seconds at 260°C.

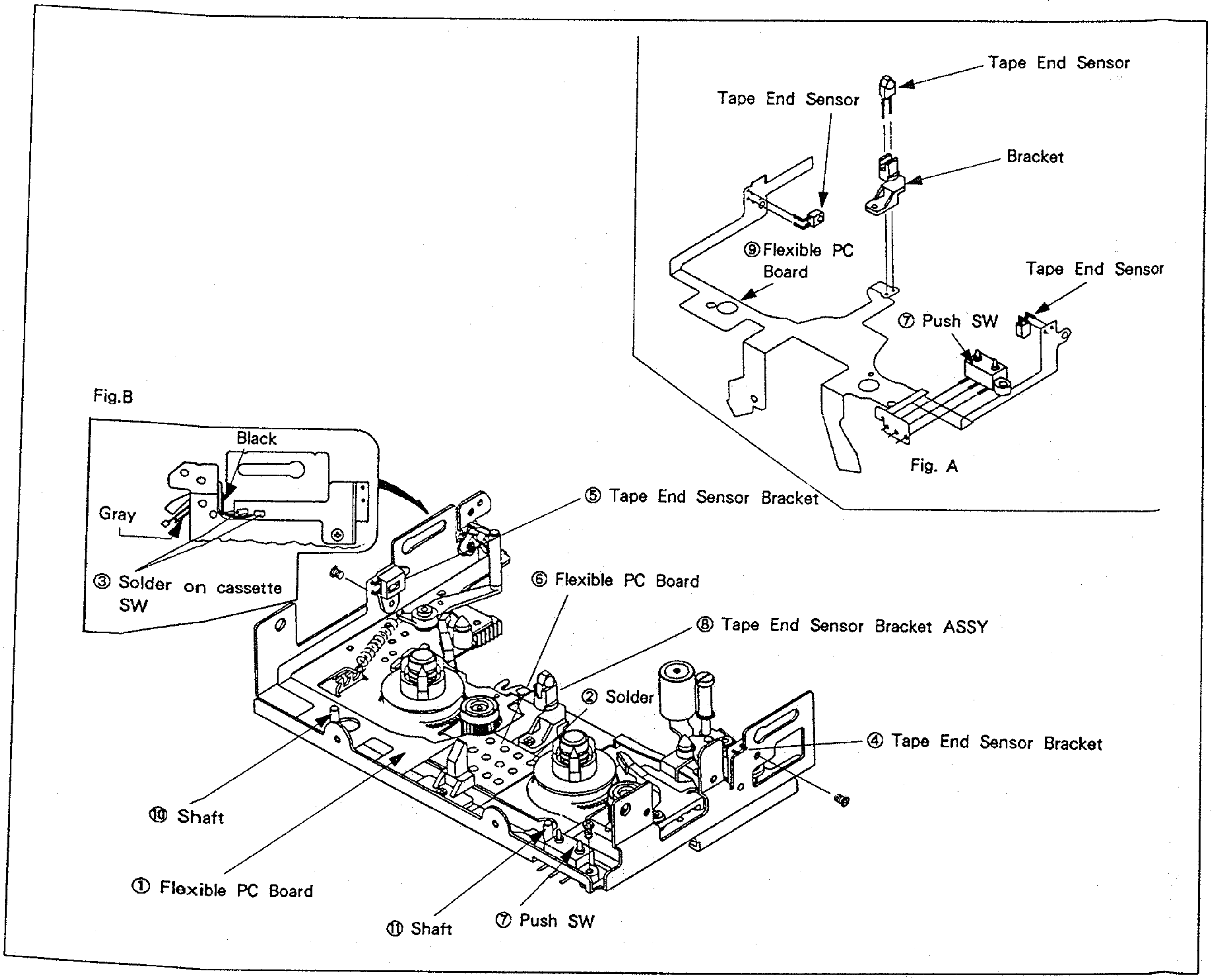


Fig.B
Black
Gray
③ Solder on cassette SW
Tape End Sensor
Tape End Sensor
Bracket
⑨Flexible PC Board
Tape End Sensor
⑦ Push SW
Fig. A
⑤ Tape End Sensor Bracket
⑥ Flexible PC Board
⑧ Tape End Sensor Bracket ASSY
② Solder
④ Tape End Sensor Bracket
⑩ Shaft
① Flexible PC Board
⑪ Shaft
⑦ Push SW

Fig. 2-20.

〔※ **Soldering Considerations**
(See Figs. 2−21. and 2−22.)〕

FPC's on the mechanism are soldered using FPC removal jig ① shown in Fig. 2−21.

1) Unsoldering
- Attach the jig onto the solder side of FPC. Make sure there is no clearance between the jig bottom and the FPC top.
- Remove all solders using unsoldering wire.

※Do not overheat the solder. Avoid touching surrounding parts with the soldering iron.

2) Sodering
- Attach the jig onto the solder side of FPC. Make sure there is no clearance between the jig bottom and the FPC top.
- While heating FPC with the soldering iron, apply solder and join the 2 FPC's at 13 points.

※Avoid applying excessive solder.
- After soldering, remove the jig ; verify freedom of rotation of the gear (with reel base).

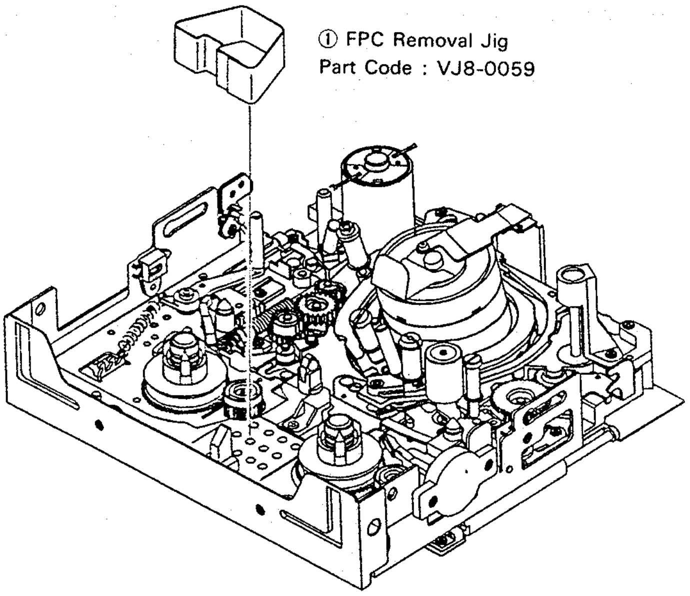

① FPC Removal Jig
Part Code : VJ8-0059

Fig. 2−21.

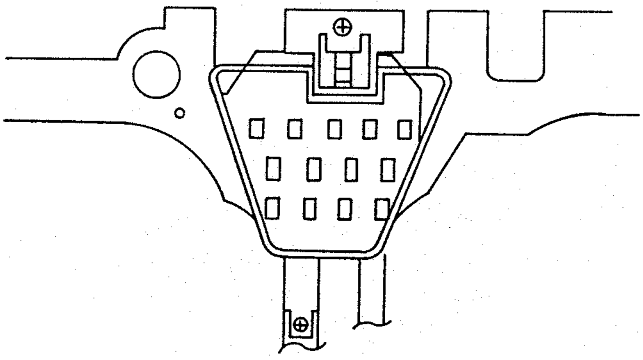


Fig. 2−22.

2-6-12. Flexible PC board (Main chassis) (See Figs. 2-23 and 2-24.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Remove the solder from flexible PC board ① on the flexible PC board of the reel chassis; separate the two flexible PC boards.
3) Unsolder lead wires of each component from the rear of the main chassis.
4) Referring to 2-6-15, remove the cylinder base.
5) Unsolder LOADING END SW ② ; remove screw ③ LOADING END SW ② and SW COVER ⑦ in this order (refer to Fig. A.); separate flexible PC board ①.

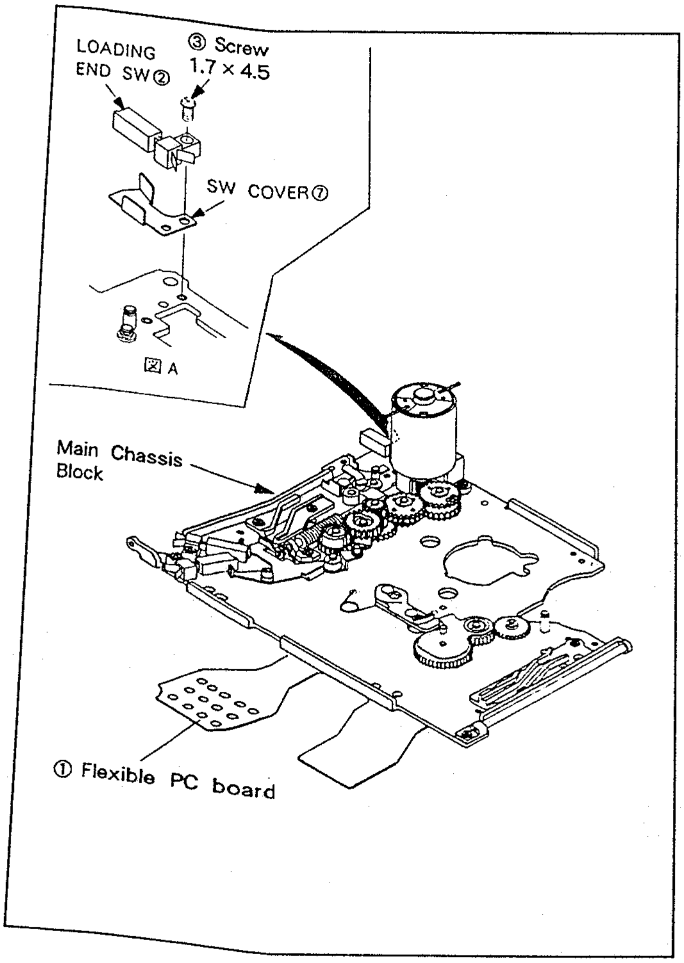


Fig. 2-23.

(2) Reinstallation procedure

1) Attach flexible PC board ① with matching with hole ④, slots ⑤ and ⑥.
2) Insert LOADING END SW ② into flexible PC board ① passing through SW COVER ⑦ with which lined up to the main chassis. Align dowels with the main chassis and secure with SW COVER ⑦ by screw ③ then solder the joints.
3) Referring to 2-6-15, attach cylinder base to the main chassis.
4) Referring to Fig. 2-24, solder lead wires and dress them.
5) Attach flexible PC board ① to the reel chassis as shown in Fig. 2-20. (Refer to 2-6-11.)
6) Referring to Section 2-1, install the cassette mechaism.

Note: While removing or reinstalling LOADING END SW ② from/to flexible PC board ①, be careful not to touch the wormgear below loading motor bracket with the soldering iron.

- Soldering should be done within 5 seconds at 260 ℃.
- Once mounting LOADING END SW ② is completed, do not touch it because it may be easily distorted.

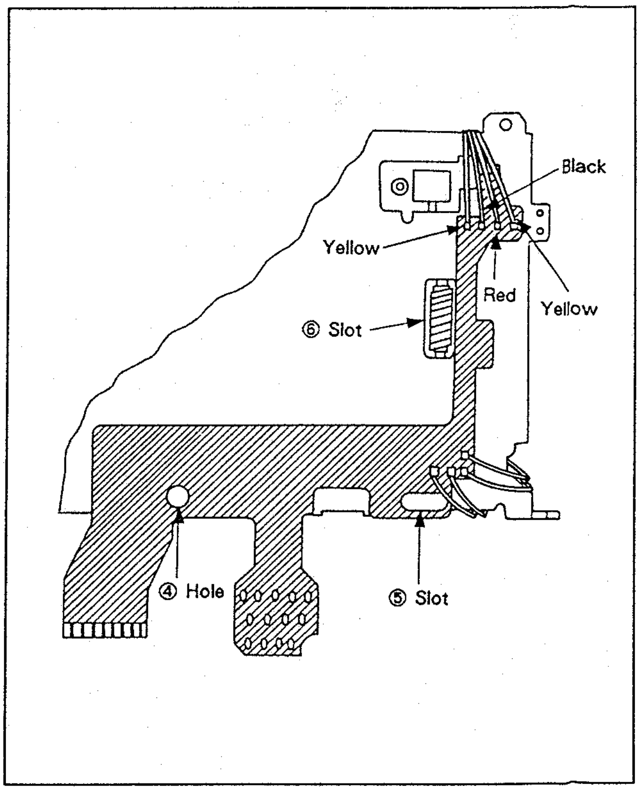


Fig. 2-24.

2–6–13. Loading motor ASSY (See Fig. 2–25.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2– 1. (EJECT mode.)
2) Unsolder the lead wires of loading motor from the rear of the main chassis.
3) Remove screws ③ (2 pcs at the rear of the main chassis) holding loading motor ASSY ① and bracket ②.

(2) Reinstallation procedure

1) Align 2 threaded holes at the bottom of loading motor ASSY ① with holes ④ in bracket ②; alternately turn screws ③. (Verify that both threads and grooves on worm screw ⑤ and worm gear of the main chassis are properly engaged.
2) Solder lead wires of loading motor ASSY ①.
3) Referring to Section 2–1, install the cassette mechanism.

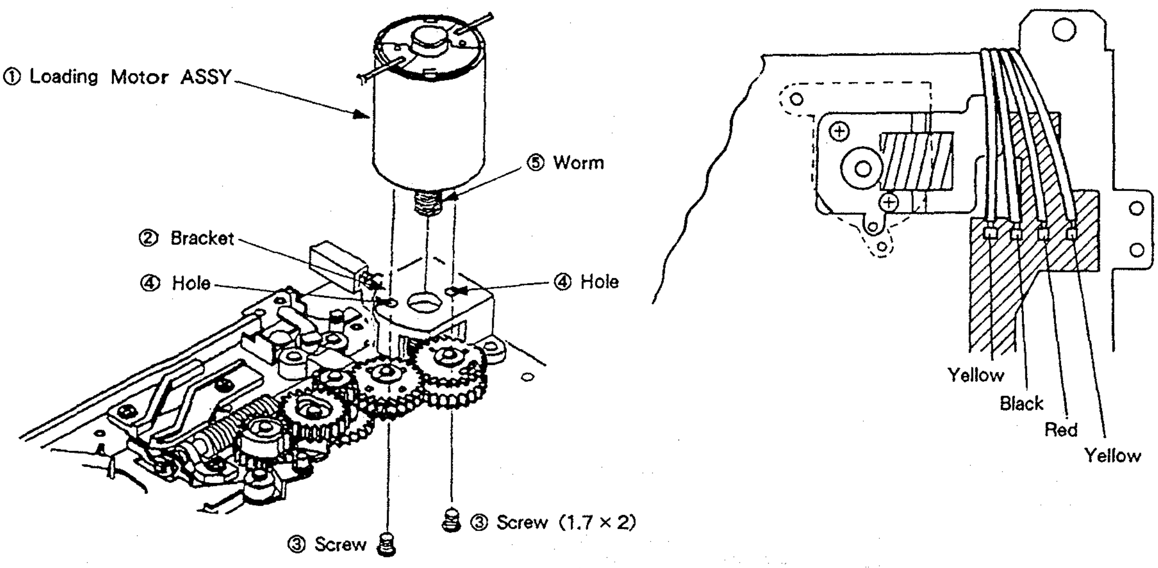

① Loading Motor ASSY
⑤ Worm
② Bracket
④ Hole
④ Hole
③ Screw (1.7 × 2)
③ Screw
Yellow
Black
Red
Yellow

Fig. 2–25.

2-6-14. TG4 (See Fig. 2-26.) (Replacing only TG4 can be done without removing cassette mechanism.)

(1) Removal procedure

1) Remove upper flange ①.

2) Remove roller ②, sleeve ③, lower flange ④ and compression coil spring ⑤.

Notes : Upon removal of upper flange ①, compression coil spring ⑤ pops off the components above it ; arrest by hand. Do not handle bronze roller ② directly with hand.

(2) Reinstallation procedure

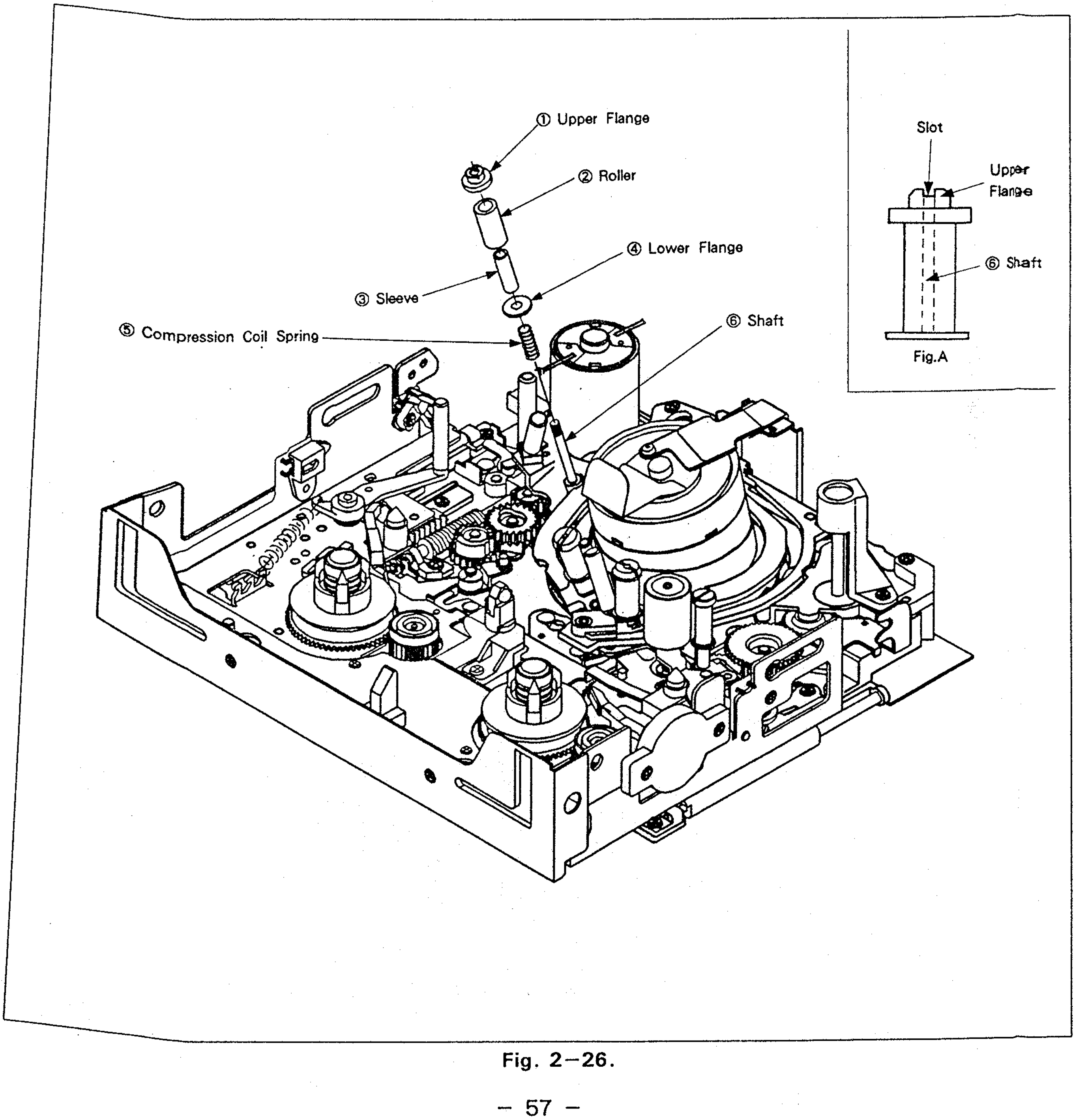
1) Insert compression spring coil ⑤, lower flange ④, sleeve ③ and upper flange ① into shaft ⑥.

2) Mount upper flange ①.

3) Preset the height as described below.

(3) Presetting height

1) See Fig. A. Screw upper flange ① until bottom of its slot is flush with top of shaft ⑥ ; unscrew the flange through one turn (360°).



① Upper Flange
② Roller
④ Lower Flange
③ Sleeve
⑥ Shaft
⑤ Compression Coil Spring
Slot
Upper Flange
⑥ Shaft
Fig.A

Fig. 2–26.

2-6-15. Cylinder Base (See Fig. 2-27.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)
2) Remove washer ① then gear ② from the main chassis.
3) Remove screws ③ and ④ (2 pcs) and separate cylinder base from the main chassis.

(2) Reinstallation procedure

1) Referring to para 2-6-16, secure cylinder base with screws ③ and ④.
2) Slide gear ② onto shaft ⑥ ; secure it with washer ①. (Mesh gears.)
3) Referring to Section 2-1, install the cassette mechanism.

Note : When mounting cylinder base, be sure to hook one end of spring ⑦ onto the cylinder base plate. (See Fig. A.)

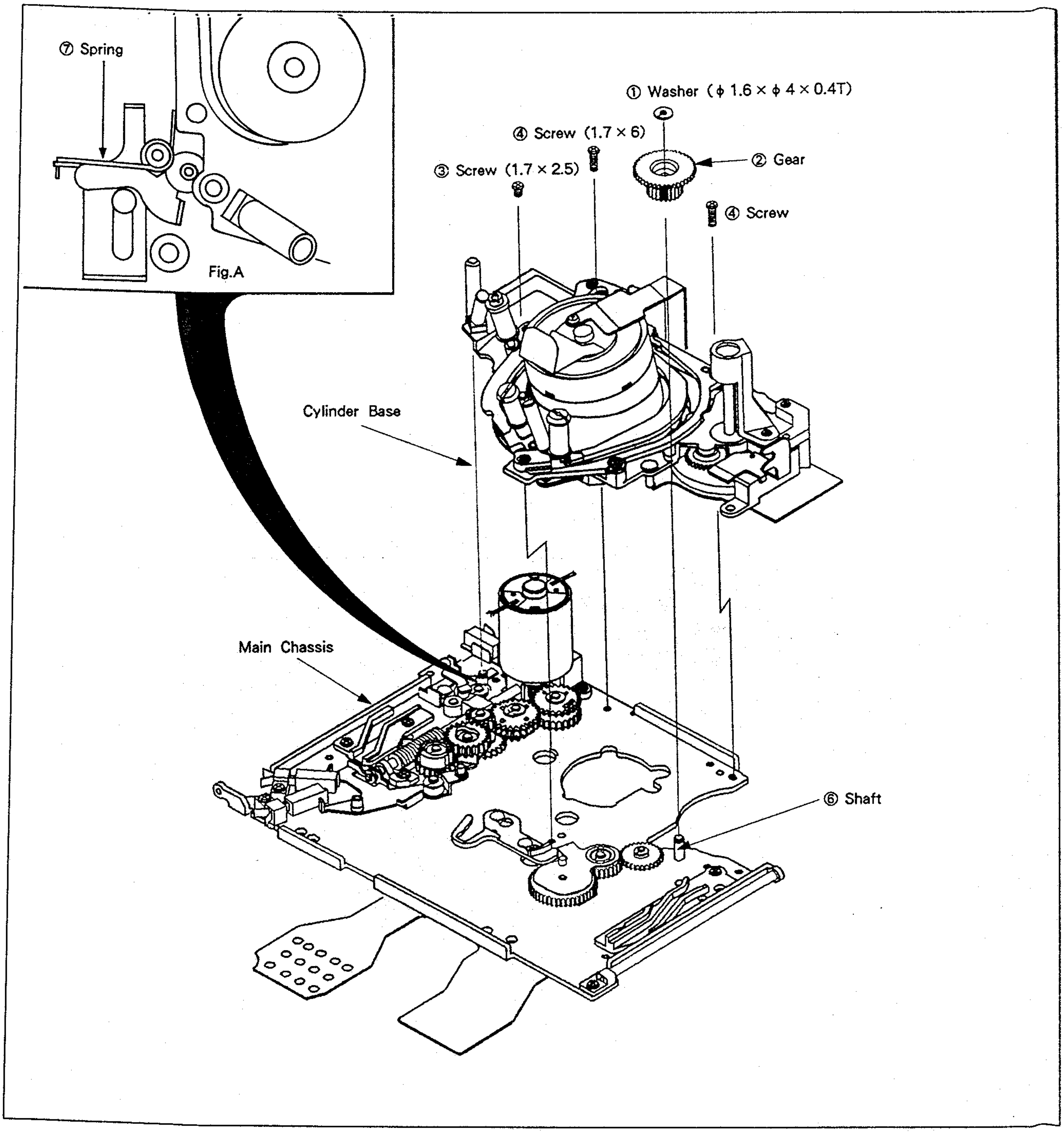

⑦ Spring
Fig.A
① Washer (ϕ 1.6 × ϕ 4 × 0.4T)
④ Screw (1.7 × 6)
③ Screw (1.7 × 2.5)
② Gear
④ Screw
Cylinder Base
Main Chassis
⑥ Shaft

Fig. 2-27.

2-6-16. In-phasing during installation of cylinder base to the main chassis.

1) Referring to Fig. 2-28, set S and T shuttles into unloading position.
2) Referring to Fig. 2-29, mesh the 3rd tooth of upper loading ring with the marked tooth of upper loading ring drive gear ; mesh the 4th tooth of lower loading ring with the marked tooth of lower loading ring drive gear.
3) Match dimples and dowels of cylinder base ASSY with the main chassis and secure them with screws ① and ②.
4) Tighten lightly screw ③ into the hole of S rail end after completion of the reel chassis ASSY in-phase adjustment.

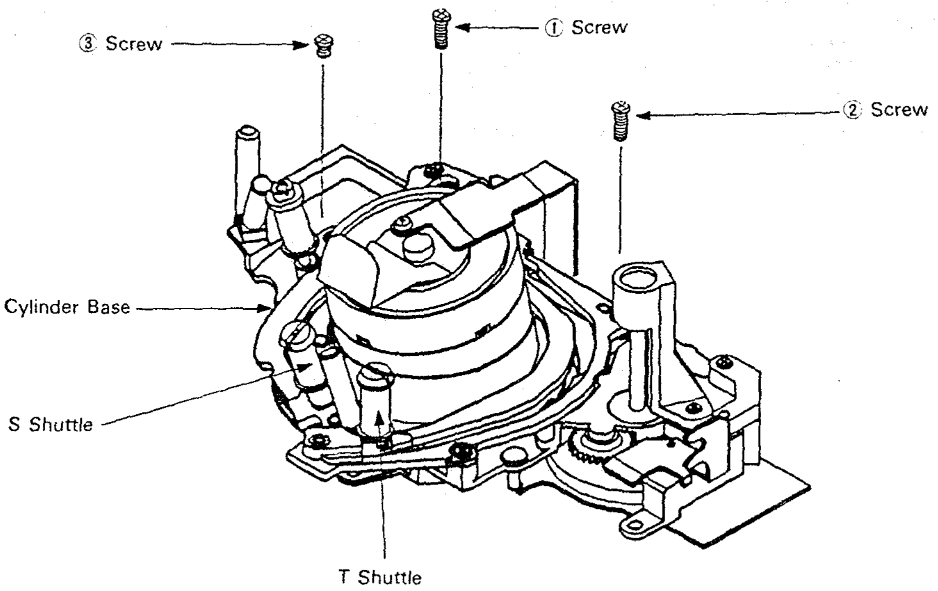

③ Screw
① Screw
② Screw
Cylinder Base
S Shuttle
T Shuttle

Fig. 2-28.

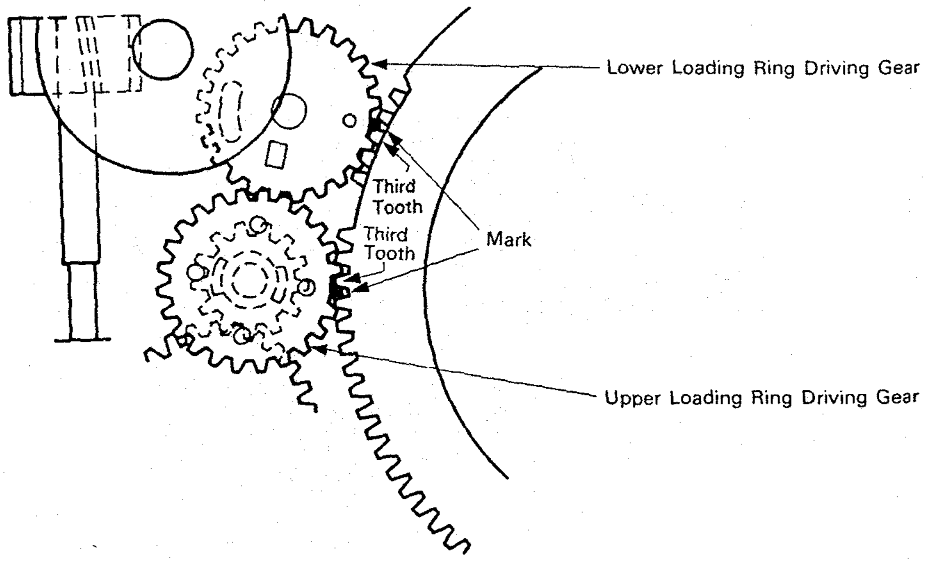

Lower Loading Ring Driving Gear
Third Tooth
Third Tooth
Mark
Upper Loading Ring Driving Gear

Fig. 2-29.

2-6-17. Cylinder (See Fig. 2-30.)

(1) Removal procedure

1) Remove the cassette mechanism referring to Section 2-1. (EJECT mode.)

2) Remove screws ① (3 pcs) from the rear of the main chassis; remove the cylinder ③.

(2) Reinstallation procedure

1) Align 2 holes at the rear of the cylinder with shafts ④ of the cylinder base.

2) Tighten screws ① (3 pcs).

3) Bend the flexible PC board ② until it matches to the bracket ⑤.

4) Referring to Section 2-1, install the cassette mechanism.

Notes:

- Tighten screws① (3 pcs) with a 0.75kg-cm torque. Do not touch cylinder directly with hand. Do not touch the cylinder heads.
- When changing the cylinder, also change the protector.
- When changing the protector, do not change the angle.
- If the angle is more than 90° or less than 45°, the protector is not appropriate. (Do not change the angle by force.)

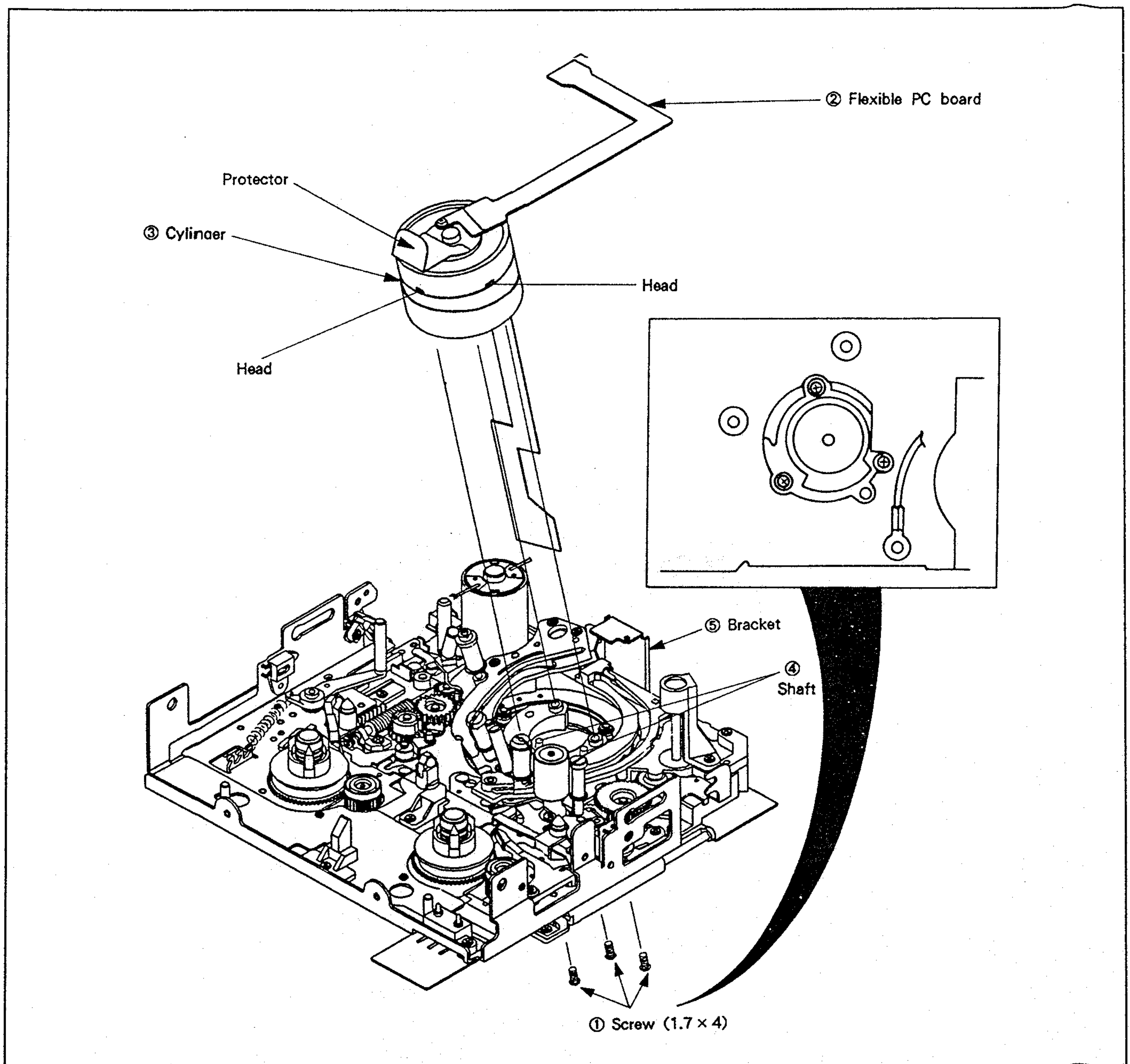


Fig. 2-30.

2-6-18. Checking reel height (See Fig. 2-31.)

Checking procedure

1) Referring to Section 2-1, remove the cassette mechanism.
   Using vernier calipers or the like, verify that there is a 5.1±0.15mm clearance between the top of the reel chassis and the rest plate of S and T reel bases.

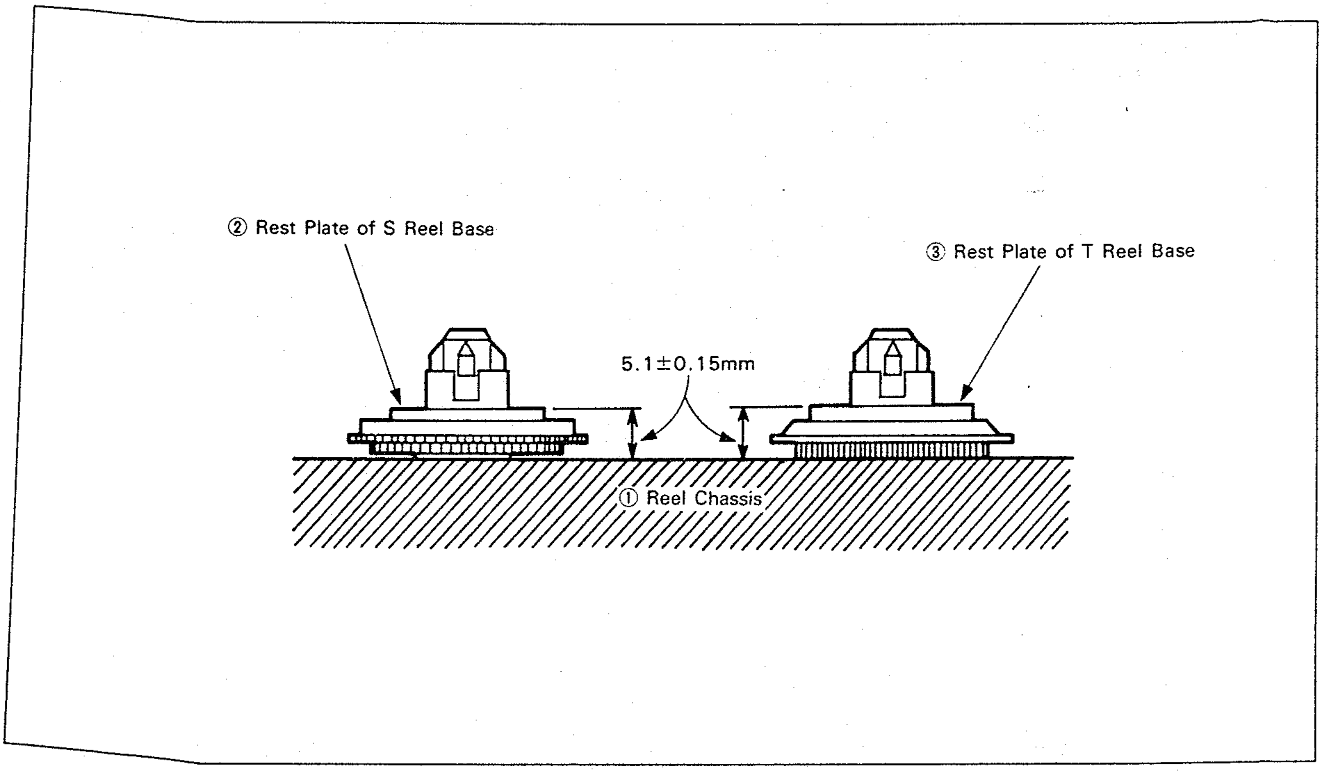

② Rest Plate of S Reel Base
③ Rest Plate of T Reel Base
5.1±0.15mm
① Reel Chassis

Fig. 2-31.

2-6-19. Checking FWD and RVS torque

1) Set the FWD and RVS takeup torque cassette (J-6080-824-A).
2) In with FWD mode verify the presence of a 8-12 g-cm torque for T reel side.
3) In recreview mode, verify the presence of a 20-28 g-cm torque for S reel side.
4) If the above values are not obtainable, interchange the reel bases.

2-6-20. Adjusting BT lever position (See Fig. 2-32.)

(1) Removal procedure

1) Referring to Section 2-1, remove the cassette mechanism.

(2) Adjusting procedure

1) Referring to Section 2-3, set the mechanical deck ready for operation.

2) Set in a unit loading completion state without actually loading a cassette.

3) Loosen screw ① holding BT band ASSY ; position BT lever ② as shown in the enlarged figure.

4) Retighten screw ①.

(3) Verification

1) Running the leading tape (P6-120), verify that there is no contact between the tape and the cassette half (See Fig. 2-33).

(4) Reinstallation procedure

1) Referring to Section 2-1, install the cassette mechanism.

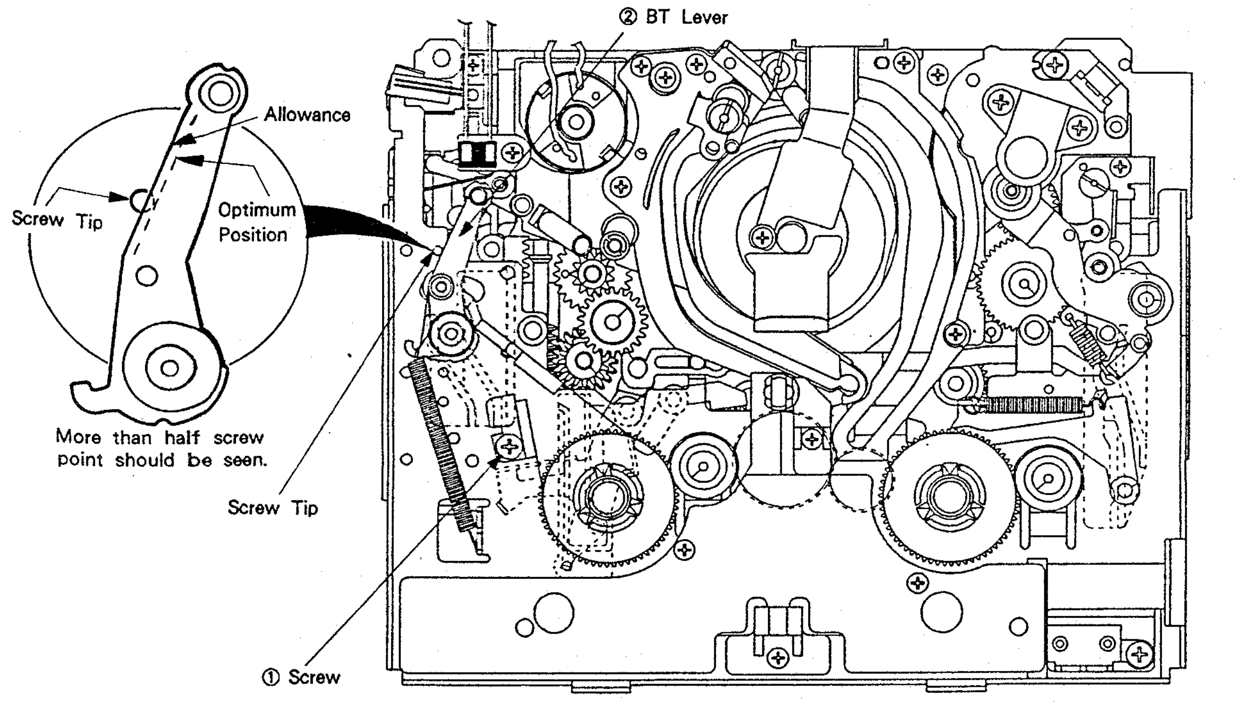

② BT Lever
Allowance
Screw Tip
Optimum Position
More than half screw point should be seen.
Screw Tip
① Screw

Fig. 2-32.

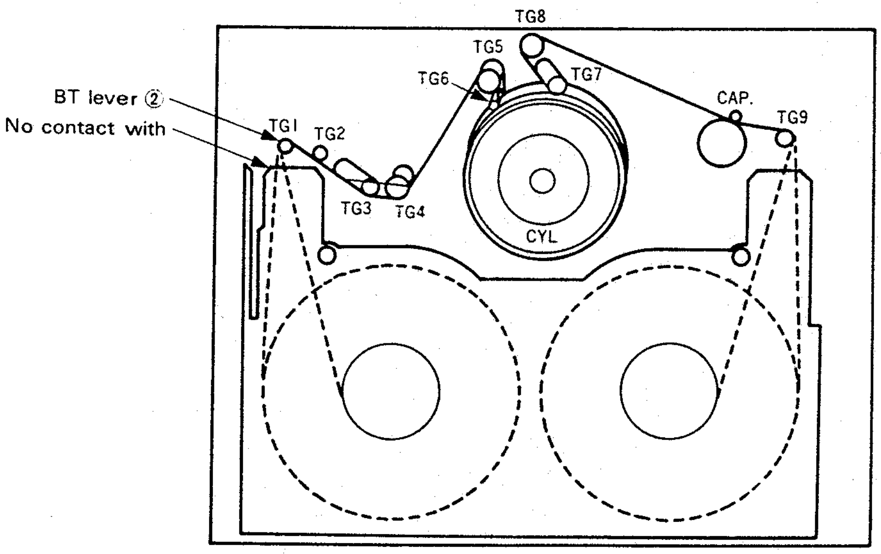

TG8
TG5
TG6
TG7
CAP.
TG9
BT lever ②
No contact with
TG1
TG2
TG3
TG4
CYL

Fig. 2-33.

2-6-21. FWD back tension adjustment

(1) Removal procedure

1) Referring to Section 2−1, remove the cassette mechanism.

(2) Adjusting procedure

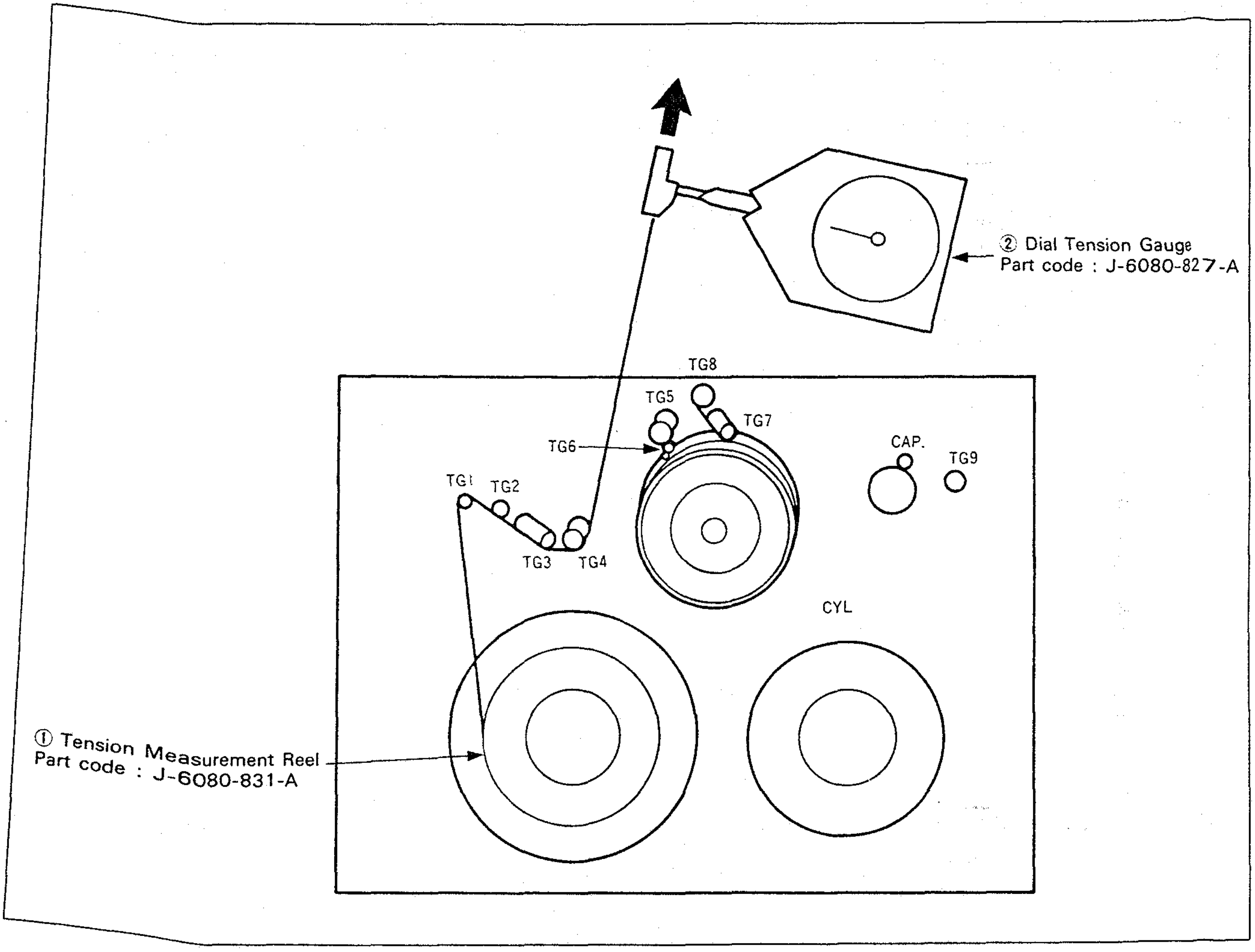
1) SET in enter REC mode.

2) Set a tension measuring reel ①.

3) Using a dial tension gauge ②, pull the tape from exit side at 14mm/sec and read the dial.

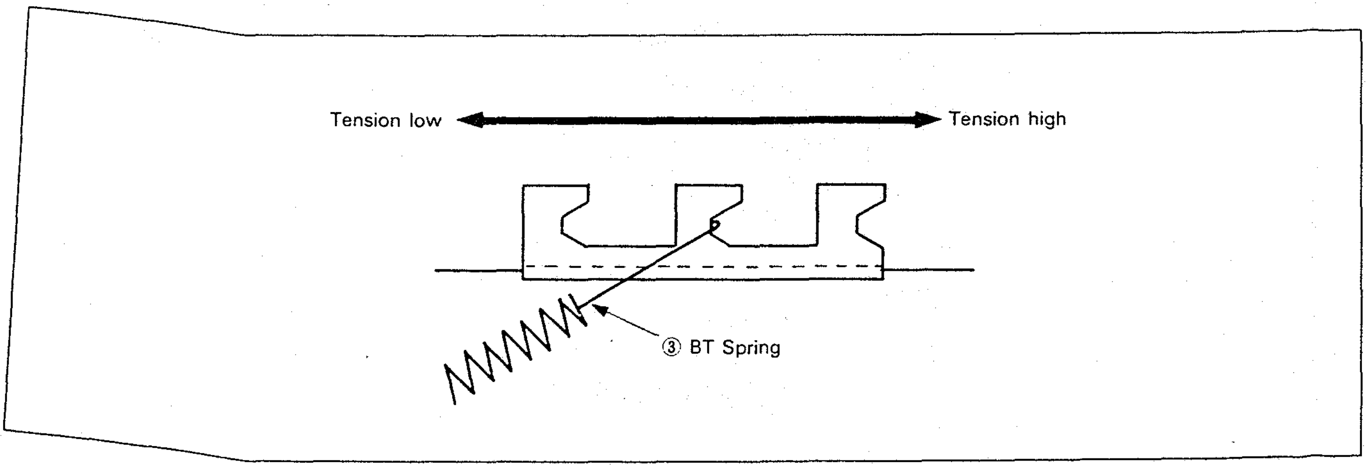
4) If the reading is outside 5~10g range, reposition the hook (See Fig. 2−35).

(3) Referring to Section 2−1, install the cassette mechanism.



② Dial Tension Gauge
Part code : J-6080-827-A
TG8
TG5
TG7
TG6
CAP.
TG9
TG1
TG2
TG3
TG4
CYL
① Tension Measurement Reel
Part code : J-6080-831-A

Fig. 2−34.



Tension low
Tension high
③ BT Spring

Fig. 2−35.

2-7. Tape Path Adjustment

The 8-mm video system employs a precision tracking ATF (automatic track finding) which uses 4 pilot signals to quickly control a tape running speed. This eliminates a tracking adjustment knob that would otherwise be required and yet can maintain an accurate tracking capability.

The ATF system, however, has a minor disadvantage in adjusting the tape path system because ATF corrects small misalignments in head tracing by default.

Therefore the shift track conversion connector (Ref. No. J-10: VJ8-0098) is used for the tape path system adjustment.

Tracking amount can be adjusted manually by turning the shift track ON, providing the easy tape path system adjustment easily.

For turning the shift track ON, select the adjustment mode and shift the modes as described below.

[Adjustment Mode]

The adjustment mode is selected by short-circuiting TP301 and TP302 (on the SY1 board) with a clip. However, the mode shifting shown below cannot be made in the camera mode (POWER SW: CAMERA side).

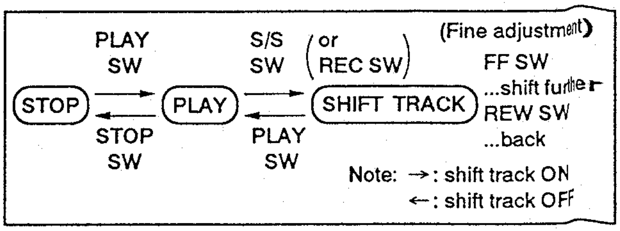

PLAY SW
S/S SW (or REC SW)
(Fine adjustment)
FF SW
...shift further
STOP
PLAY
SHIFT TRACK
REW SW
...back
STOP SW
PLAY SW
Note: →: shift track ON
←: shift track OFF

Fig. 2-36.

- The adjustment must be made after checking the completion of the camera and video parts adjustments.

2-7-1. Connecting

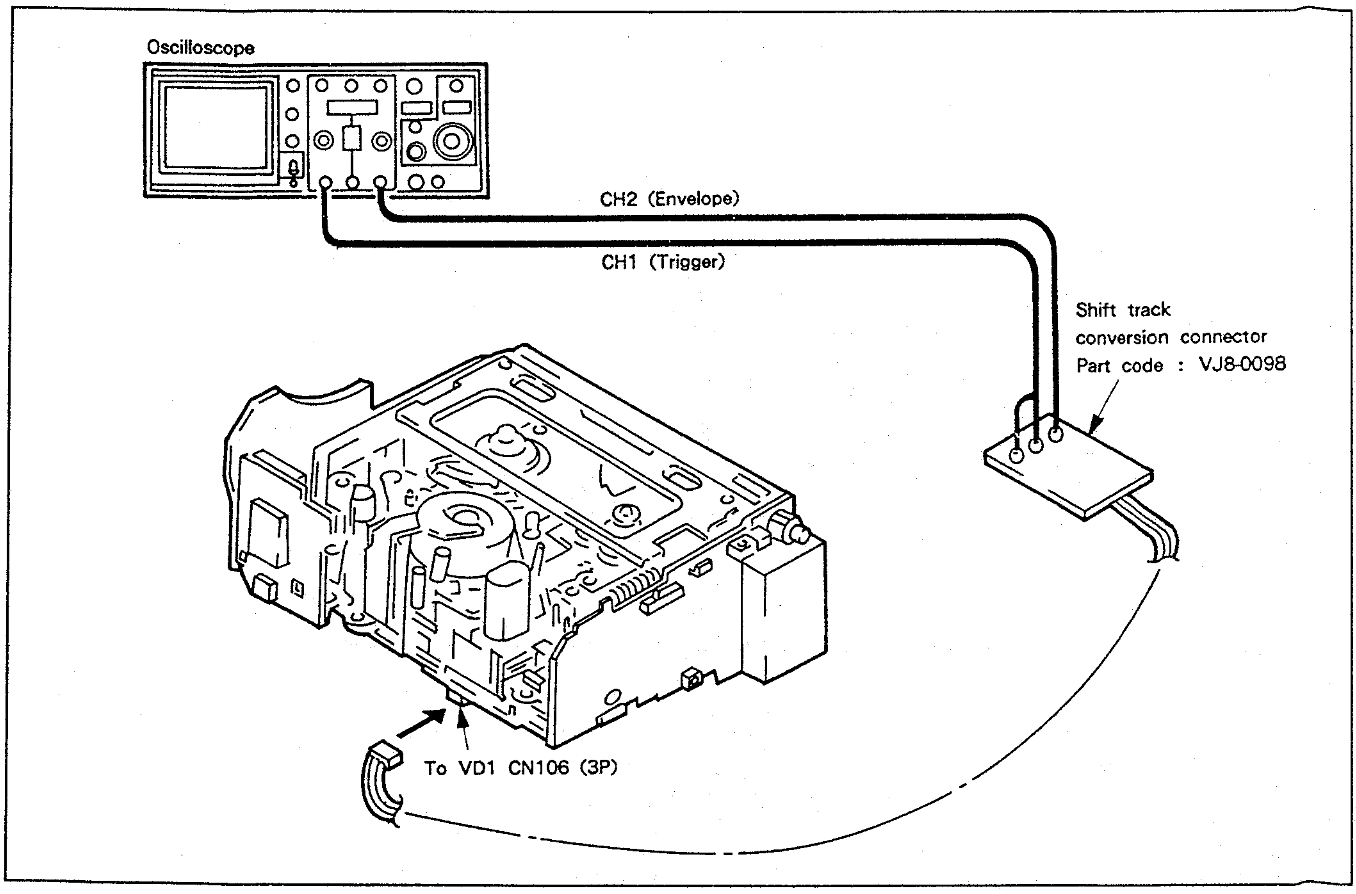

Oscilloscope
CH2 (Envelope)
CH1 (Trigger)
Shift track conversion connector Part code : VJ8-0098
To VD1 CN106 (3P)

Fig. 2-37.

2-7-2. Preparation for adjustments

1) Clean the tape running surface (tape guide, cylinder, capstan shaft and pinch roller).
2) Referring to the connection diagram of the shift track tool on 2-7-1, connect the shift track conversion connector.
3) Connecting oscilloscope
   1CH: FBRF terminal of the shift track tool
   2CH: RF-SWP terminal of the shift track tool
   (External trigger)
4) Run the tracking alignment tape (WR5-1CP).
5) Verify on the scope that waveforms at entrance and exit are flat (See Fig. 2-38, ⓐ).
   If not (See Fig. 2-38, ⓑ and ⓒ), take the following step.
   Perform according to 2-7-3, tracking coarse adjustment and go to 2-7-4 tracking fine adjustment.

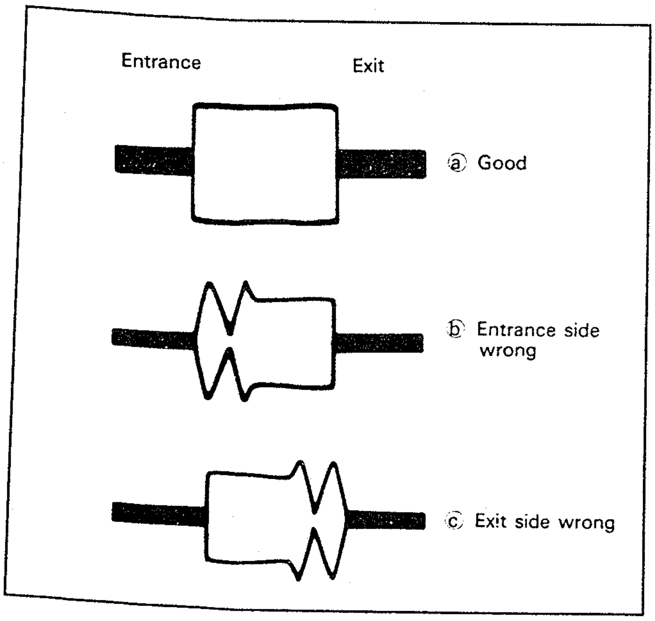


Fig. 2-38.

6) If the RF waveform is good, go to para 2-7-8, Checking After Adjustment.

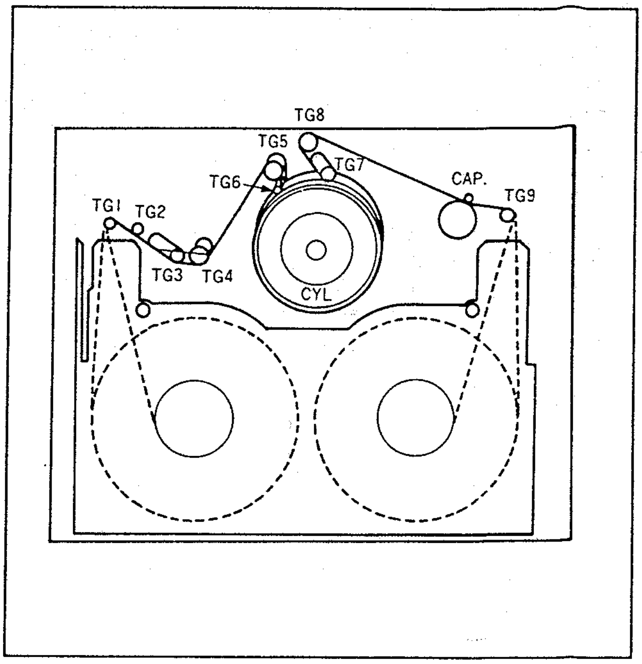


Fig. 2-39.

2-7-3. Tracking coarse adjustment

1) Run the tracking adjustment tape.
2) Turn No.5 guide (TG5) to flatten the waveform at the entrance side.
3) Turn No.8 (TP8) to flatten the waveform at the exit side.

2-7-4. Tracking fine adjustment

1) Run the tracking alignment tape and turn on the SHIFT TRACK. Make the fine adjustment so that the amplitude of the PF waveform becomes 2/3 of its maximum. (See Figs. 2-36 and 2-40.)

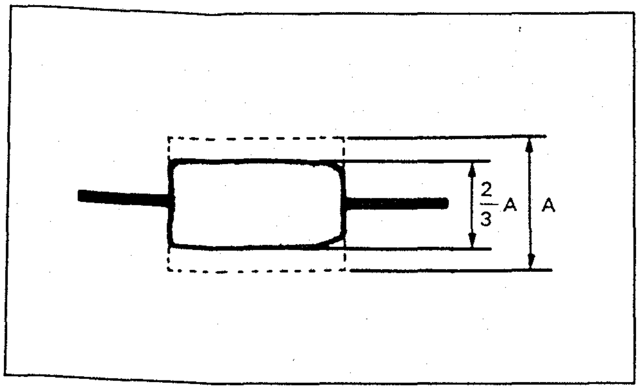


Fig. 2-40.

2) Check that the waveform is flat. If not, turn No.5 guide (TG5) and No.8 (TG8) to flatten the waveform.

2-7-5. No.4 guide (TG4) adjustment

When No.4 guide is turned or replaced, the adjustment should be made after the presetting height of No.4 guide is performed.

Presetting height of No.4 guide

1) Screw TG4 nut until its slit section becomes the same height as the top of TG4 shaft. (See Fig. 2-41. ⓐ)
2) Turn TG4 nut 360 ° counterclockwise. (See Fig. 2-41. ⓑ)

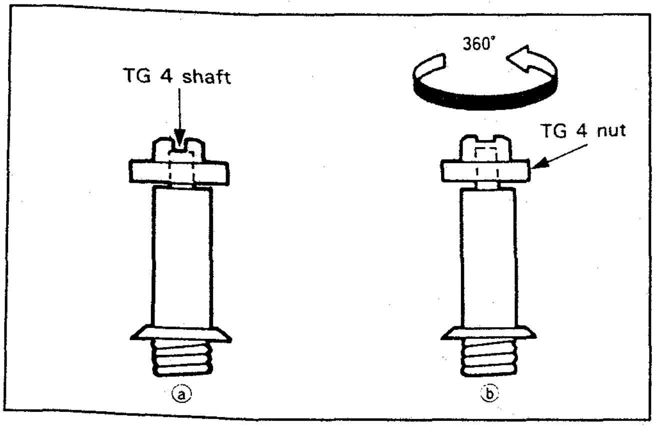


Fig. 2-41.

Adjusting No.4 guide (TG4)

1) Run the tracking alignment tape.
2) In REV mode, monitor the waveform (See Fig. 2-42.)
   - When the waveform is no good (as shown in Fig. 2-42. ⓐ), perform height preset steps of "Presetting Height of No.4 Guide" then go to the step 3) below.

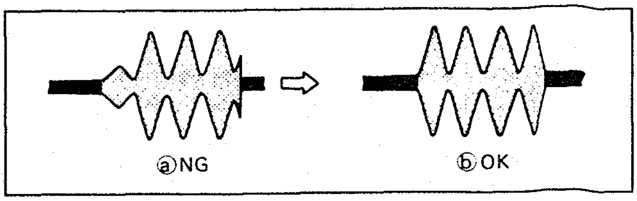


Fig. 2-42.

3) Rotate TG4 nut 90 ° clockwise. Repeat step 2). Repeat steps 2) and 3) until the correct waveform is obtained. Note that the tracking waveform (Fig. 2-40.)remains unchanged during these steps. If it varies, fine adjust tracking at entrance side and go to step 2) again.

2–7–6. No.9 guide (TG9) adjustment

1) Run the tracking alignment tape ; set in PLAY mode.
2) Make sure there is no tape slack between No.9 guide (TG9) and capstan (See Fig. 2–43). If present, eliminate the slack by turning No.9 guide (TG9).
3) In REV mode, make sure there is no tape slack : less than 0.5 mm. If it exists, eliminate it by turning No.9 guide (TG9).

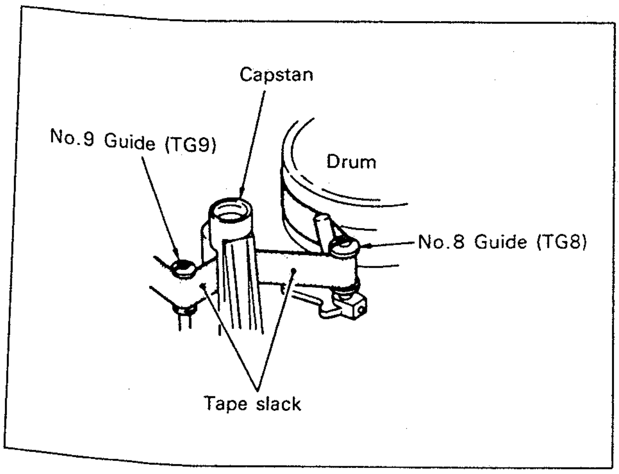


Fig. 2-43

2–7–7. Verification of CUE and REV waveforms

1) Run the tracking alignment tape ; set in REV mode.
Make sure that the waveforms have equidistant peaks (See Fig. 2–44).
If not, perform according to para 2–7–4, Tracking Fine Adjustment, and 2–7–5, No.4 Guide Adjustment.
2) Set in CUE mode. Make sure that the waveforms have equidistant peaks (See Fig. 2–44). If not, perform according to para 2–7–4, Tracking Fine Adjustment.

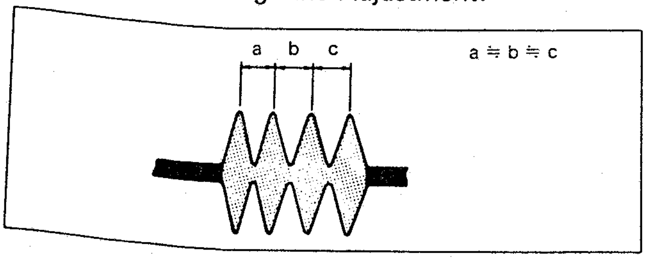


Fig. 2-44

2–7–8. Checking after adjustments

1. Checking tracking performance

1) Run tracking alignment tape ;Switch the SHIFT TRACK ON,if OFF.the RF wave form becomes about 2/3 of its maximum amplitude (see Fig.2–45).
2) Make sure that the minimum amplitude (EMIN) is more than 75% of its maximum amplitude (EMAX) (See Fig. 2–46).
3) Verify existence of stable waveform amplitude (See Fig. 2–47).

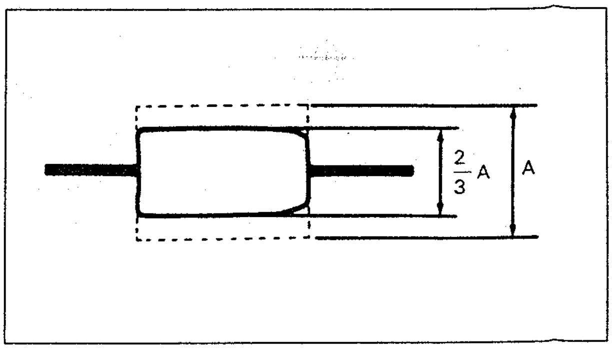


Fig. 2-45

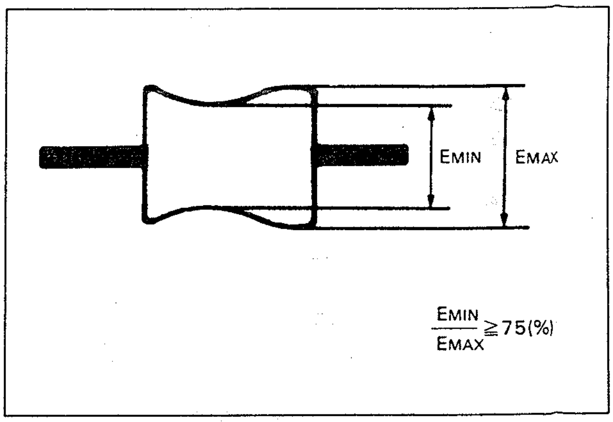


Fig. 2-46

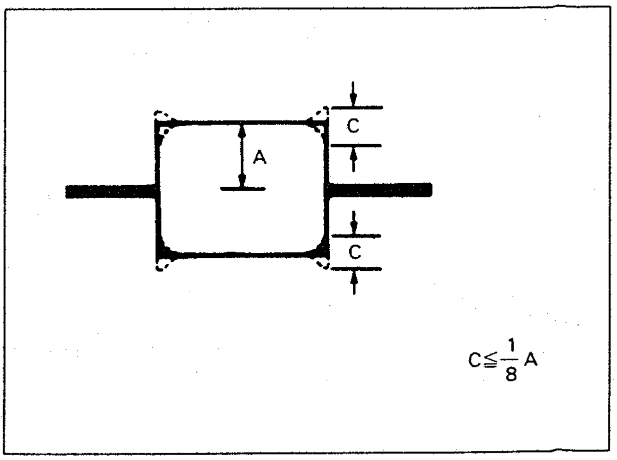


Fig. 2-47

2. Checking Rise Time

1) Run tracking alignment tape.
2) Adjust LEVEL knob of the shift track jig so that the RF waveform is at its maximum amplitude.
3) Eject the cassette and reload it again.
4) Set in PLAY mode and verify fast rise of RF waveform leading edges.
   Also verify absence of slack around the pinch roller (See Fig. 2−43).
5) Replay the tape after each CUE, REV, FF and REW operation ; verify that all waveforms have fast rising edges.

3. Checking Tape Running

In PLAY mode, verify the absence of clearance between tape edge and No.4 guide lower flange, No.5 guide upper flange and No.8 guide upper and lower flanges. Also verify the absence of curls at No.9 guide on upper and lower flanges (See Fig. 2−48).

Note: When the whole adjustment and the checking are completed, turn off the SHIFT TRACK, remove the short-clip and release the ADJ mode. (See Fig. 2-36.)

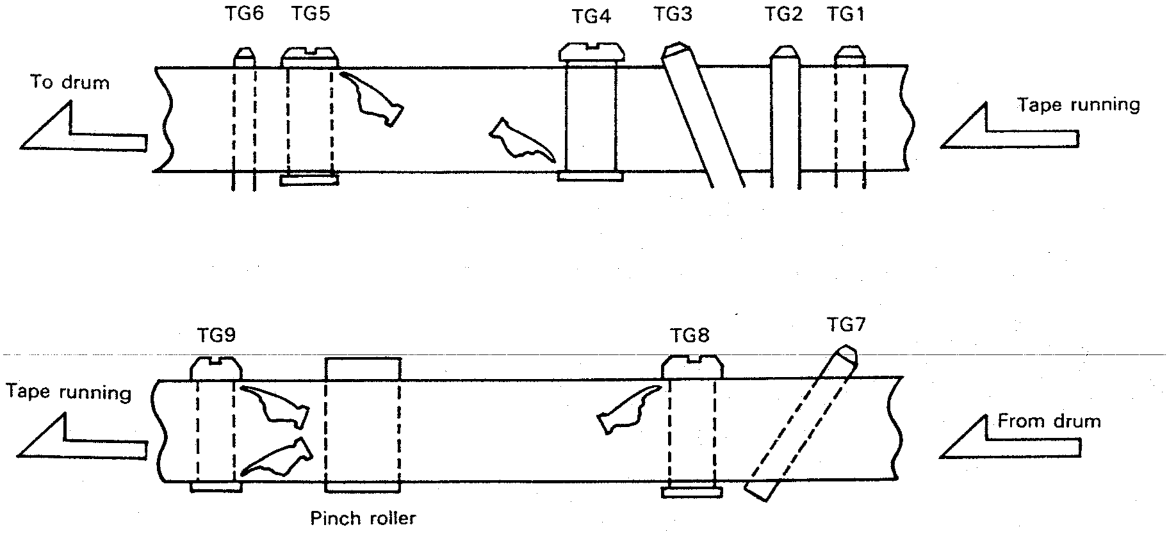


Fig. 2-48

3. VIDEO BLOCK ADJUSTMENT

[Equipments]

1) Monitor TV
2) Oscilloscope 2 phenomena, band 10 MHz or wider, delay mode. (Use 10:1 probe unless otherwise specified.)
3) Frequency counter
4) Pattern generator with video output terminal
   Note: One on which the chroma signal can be turned off)
5) Vectorscope
6) Regulated power supply
7) Alignment tape
8) MP tape
9) Tools (Refer to Figs. 3-1, 3-2.)

[Alignment tape]

For video frequency characteristics adjustment (WR5-6C) Part code: 8-967-955-17 or (WR5-2C)
For operation check (WR5-5CSP) Part code: 8-967-995-47

Name	Contents		Application
Video frequency characteristics (WR5-6C), (WR5-2C)	1. Recorded area 2. Recorded contents 3. Marker	Video RF sweep 0 to 10 MHz 1, 3.58, 5.5, 7 kHz	Frequency characteristics adjustment
Operation check (WR5-5CSP)	1. Recorded area 2. Recorded contents	PCM to video Color bar, monoscope (SP) Audio signal (FM), PCM audio signal	Operation check

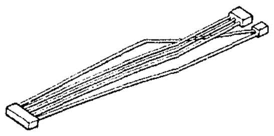
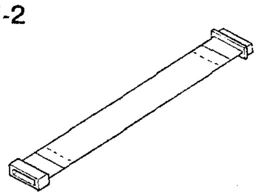
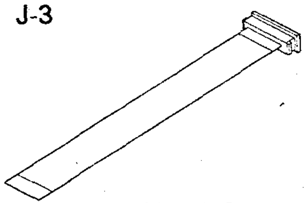
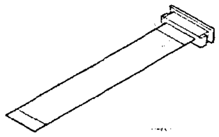
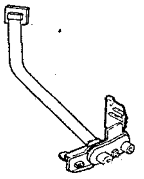
J-1  Junction cord Part code: VJ8-0089	J-2  Junction FPC Part code: VJ8-0095	J-3  Junction FPC Part code: VJ8-0096	J-4  Junction FPC Part code: VJ8-0097
J-5  A.V. terminal unit Part code: VJ8-0094	Alligator clip lead wire 		

Fig. 3-1.

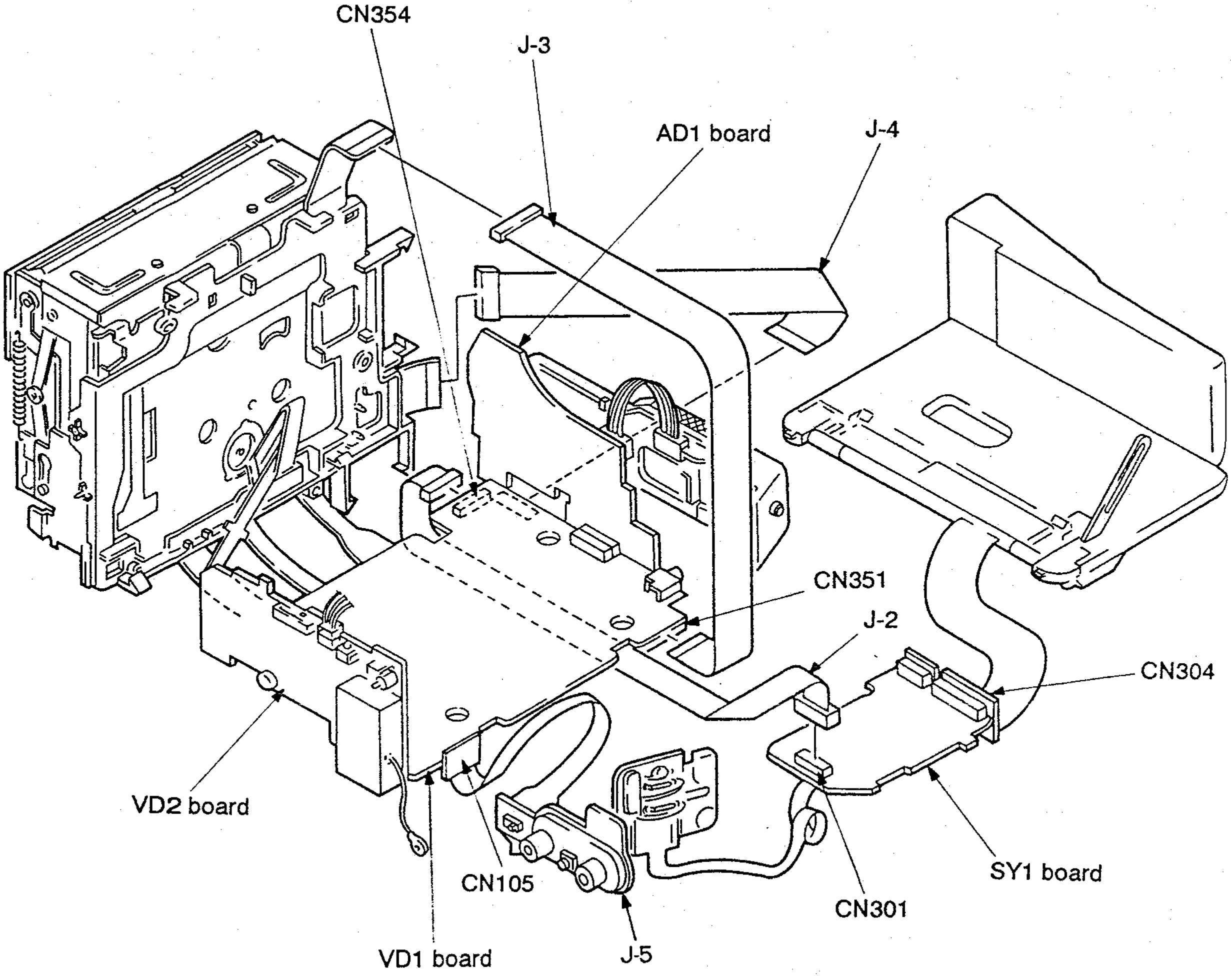
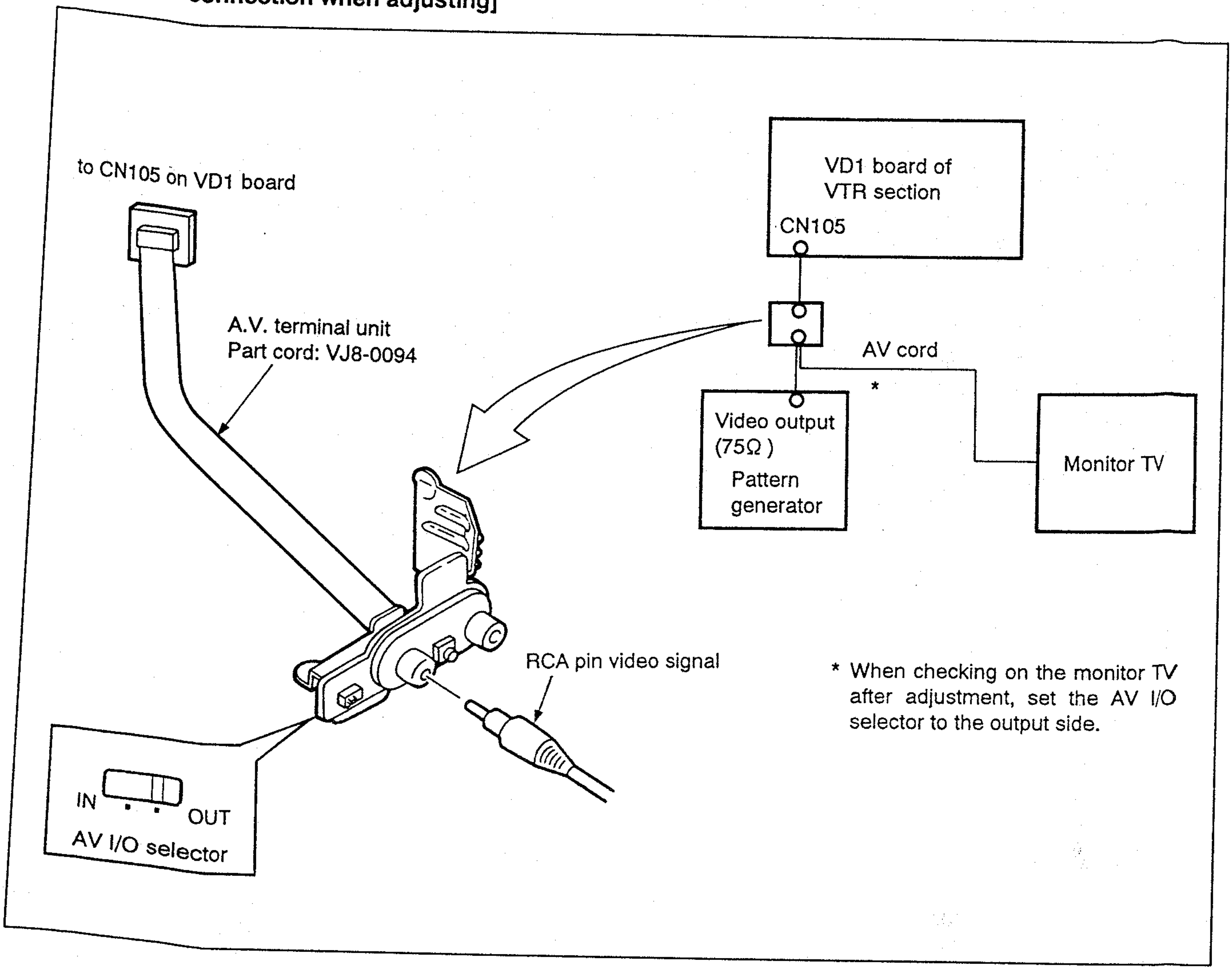

CN354
J-3
AD1 board
J-4
CN351
J-2
CN304
VD2 board
CN105
VD1 board
J-5
CN301
SY1 board

Fig. 3-2. Video block setup and connection

[Equipments connection when adjusting]


to CN105 on VD1 board
A.V. terminal unit
Part cord: VJ8-0094
VD1 board of
VTR section
CN105
AV cord
*
Video output
(75Ω)
Pattern
generator
Monitor TV
RCA pin video signal
IN
OUT
AV I/O selector

* When checking on the monitor TV after adjustment, set the AV I/O selector to the output side.

Fig. 3-3. Connection diagram

[Set up for adjustment]

For adjustment of the VTR section, the video signal from the pattern generator is used as the adjustment signal. Therefore, it is necessary that this video output signal is within the specified level.

Connect the oscilloscope to CN105 ④ (VIDEO IN) on the VD1 board. Confirm that the amplitude of the sync signal of the video signal is about 0.3V, and that the amplitude of the video section is about 0.7V, and that the amplitude of the burst signal is about 0.3V and is flat and that the level ratio of the burst signal and the "red" signal is 0.30:0.66.

The video signal to be used for the VTR adjustment is shown in Fig. 3-4.

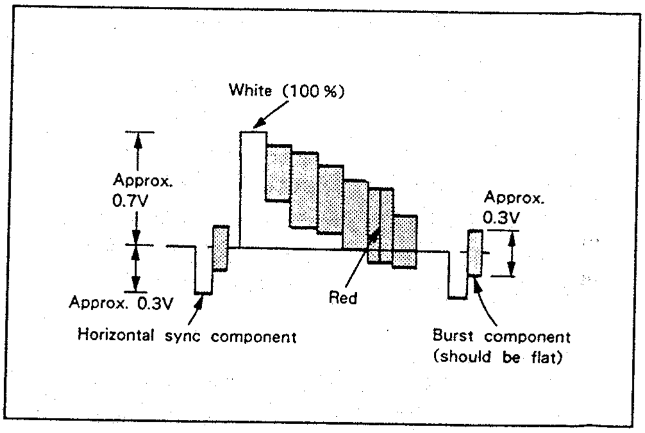

White (100 %)
Approx.
0.7V
Approx. 0.3V
Horizontal sync component
Red
Approx.
0.3V
Burst component
(should be flat)

Fig. 3-4. Color bar signal from the pattern generator

3-1. SYSTEM CONTROL, SERVO SYSTEM ADJUSTMENT

Adjustment order:

1) Crystal oscillation frequency adjustment for clock
2) H sync oscillation frequency adjustment
3) On screen character position adjustment
4) Battery low voltage adjustment
5) Switching position adjustment
6) Motor driver PWM oscillation frequency adjustment
7) Still noise position adjustment

[ADJ mode]

It can be entered ADJ mode by short-circuiting TP301 and TP302 on the SY1 board with a clip. However, when in CAMERA mode (POWER SW CAMERA side), mode shifting cannot be made as shown below.

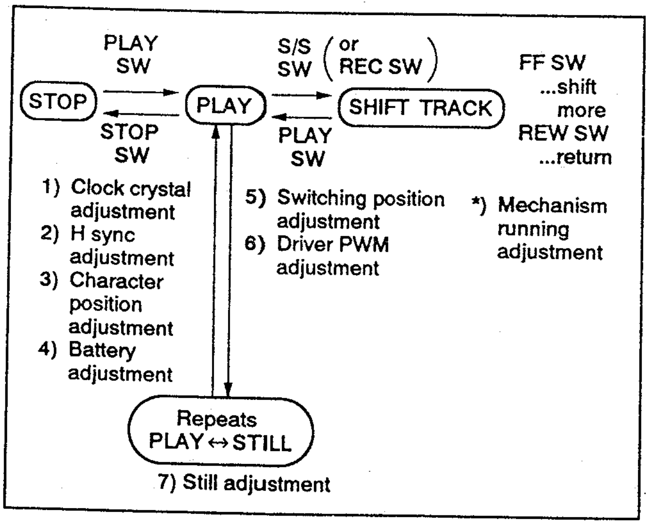

PLAY SW
STOP
PLAY
STOP SW
S/S SW (or REC SW)
PLAY SW
SHIFT TRACK
FF SW ...shift more
REW SW ...return
1) Clock crystal adjustment
2) H sync adjustment
3) Character position adjustment
4) Battery adjustment
5) Switching position adjustment
6) Driver PWM adjustment
*) Mechanism running adjustment
Repeats PLAY↔STILL
7) Still adjustment

Fig. 3-5. ADJ mode

3-1-1. Crystal Oscillation Frequency Adjustment for Clock

Power Switch:	VTR or CAMERA side
Mode:	ADJ mode E-E
Input Signal:	Arbitrary
Measurement Point:	TP303 (SY-1 board)
Measuring Equipment:	Frequency counter
Adjustment CT:	CT301 (SY1 board)
Specified Value:	488.281 ± 0.002 μsec

Connection:

Connect TP304 (GND) to the minus side of the counter input, and TP303 to the plus side.

Adjusting method:

Set the measurement period to 488.281 ± 0.002 μsec using CT301.

3-1-2. H Sync Oscillation Frequency Adjustment

Power Switch:	VTR or CAMERA side
Mode:	E-E
Input Signal:	Arbitrary
Measurement Point:	TP321 (VD1 board)
Measuring Equipment:	Frequency counter
Adjustment VR:	VR321 (VD1 board)
Specified Value:	15.734 ± 0.100 kHz (NTSC) 15.625 ± 0.100 kHz (PAL)

Connection:

1) Connect TP324 (GND) to the minus side of the counter input, and TP321 (H sync) to the plus side.
2) Short-circuit TP322 (AFC ADJ) and TP323 (S/S5V) with a clip, and stop COMP SYNC input to Pin ② of IC322.

Adjusting method:

Adjust with VR321 the measuring frequency to;

15.734 ± 0.100 kHz (NTSC)
15.625 ± 0.100 kHz (PAL)

3-1-3. On Screen Character Position Adjustment

Power Switch:	CAMERA side
Mode:	ADJ mode without cassette
Input Signal:	Arbitrary
Measurement Point:	TV monitor screen
Measuring Equipment:	TV monitor screen
Adjustment CT:	CT321 (VD1 board)
Specified Value:	The center mark of display is the center of the monitor screen.

Adjusting method:

Adjust so that the center mark of display comes to the center of the monitor screen with CT321.

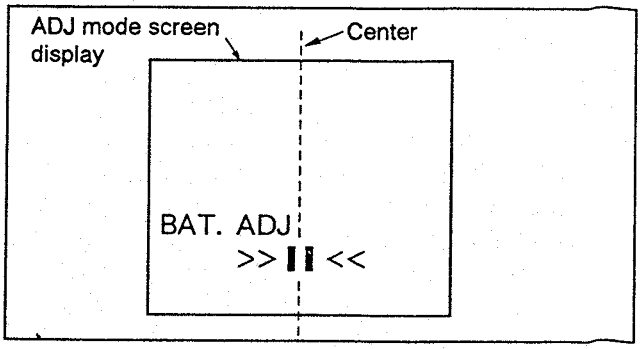

ADJ mode screen display
Center
BAT. ADJ
>> ▌▌ <<

Fig. 3-6.

Note: Perform this adjustment after H sync oscillation frequency adjustment.

3-1-4. Battery Low Voltage Adjustment

Power Switch: CAMERA side
Mode: ADJ mode without cassette
Input Signal: Arbitrary
Measurement Point: TV monitor screen
Measuring Equipment: Digital multimeter
Adjustment VR: VR351 (VD1 board)
Specified Value: Blink the center mark of display.

Note: The voltage measurement must be performed with the battery terminal of the deck.
Use a short and thick lead wire as possible to connect from the DC power supply to the unit.

Adjusting method:

1) Adjust the output voltage of the DC power supply so that the voltage readings on the digital multimeter shows:
   5.28 ± 0.01V
   (when the camera block is not connected.)
   5.30 ± 0.01V
   (when the camera block is connected.)
2) Adjust with VR351 so that the displayed center mark "▮▮" blinks.
   At this time, adjust so that the blinking "▮▮" shifts from its left ">". (Refer to Fig. 3-7.)

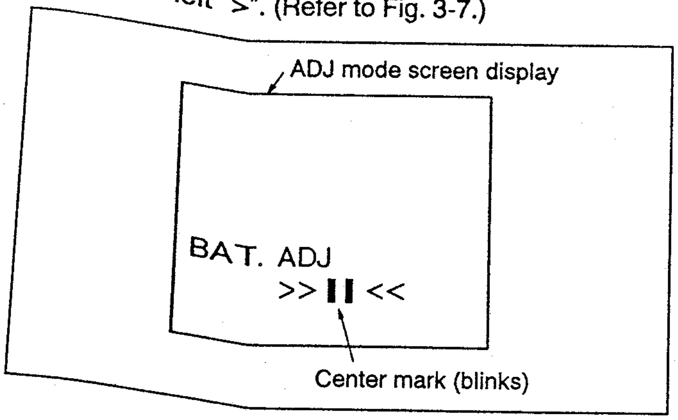


Fig. 3-7.

3-1-5. Switching Position Adjustment

Power Switch: VTR side
Mode: ADJ mode PLAY
Alignment Tape: WR5-5NSP (NTSC)
WR5-5CSP (PAL)
Measurement Point: CH1: RFSW1 (Pin ② of CN107 on VD1 board) (Sync trigger)
CH2: LINE OUT (TP104 on VD1 board)
GND: GND (Pin ① of CN107 on VD1 board)
Measuring Equipment: Oscilloscope
Adjustment VR: VR352 (VD1 board)
Specified Value: 6.5 ± 0.3H

Adjusting method:

Adjust the vertical sync signal to 6.5H from the rising edge (or falling edge) of the RFSW1 with VR352.

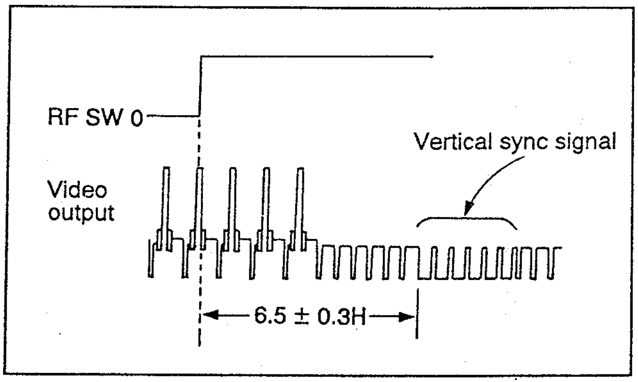


Fig. 3-8.

3-1-6. Motor Driver PWM Oscillation Frequency Adjustment

Power Switch: VTR side
Mode: PLAY
Input Signal: Arbitrary
Measurement Point: TP381 (VD1 board)
Measuring Equipment: Frequency counter
Adjustment VR: VR381 (VD1 board)
Specified Value: 480 ± 2 kHz

Connection:

Connect TP324 (GND) to the minus side of the counter input, and TP381 to the plus side.

Adjusting method:

Adjust the measurement frequency to 480 ± 2 kHz with VR381.

Note: If the counter display does not stabilize, add a capacitor (1PF or 2PF) between TP324 and TP381.

3-1-7. Still Noise Position Adjustment

Power Switch:	VTR side
Mode:	STILL ↔ PLAY (only in ADJ mode)
Tape:	Self-recorded tape (LP REC) (Use the midsection of a 90 minutes tape)
Measurement Point:	TV monitor screen
Measuring Equipment:	TV monitor screen
Adjustment VR:	VR353 (VD1 board)
Specified Value:	Equalize the noise bars above and below.

Adjusting method:
Adjust the noise bar so that the bars above and below on the monitor screen are equalized with VR353.

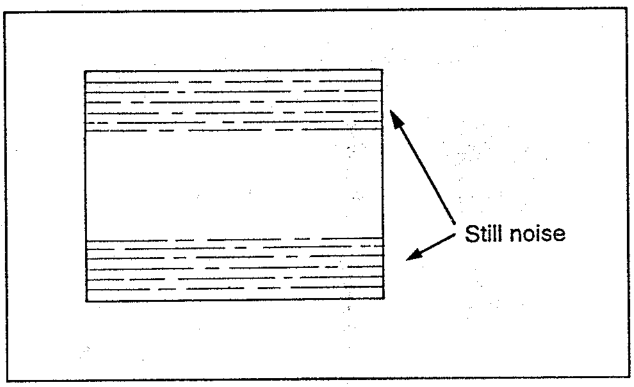


Fig. 3-9.

When the adjustments of the system control and servo system are completed, remove short clip from TP301 and TP302 (SY1 board) to release ADJ mode.

3-2. VIDEO SYSTEM ADJUSTMENT

When adjust the video system, follow the order below in principle. The color video signal supplied from the pattern generator is used as the video input signal for the video system adjustment of REC mode. Confirm that the level of sync and color burst signals meet the specification for set up as shown in Fig. 3-4.

Note: When setting the RECORD MODE while video system adjustment, connect jumper wire between TP301 and TP302 on the SY1 board.

Adjustment order:
1) Playback frequency characteristics check
2) Flying erase check
3) Sync AGC adjustment
4) Trap fo adjustment
5) Comb filter phase adjustment
6) Comb filter level adjustment
7) PB Y level adjustment
8) PB line out level adjustment
9) Y FM carrier frequency adjustment
10) Y FM deviation adjustment
11) REC Y recording current adjustment
12) REC C recording current adjustment
13) REC AFM recording current adjustment
14) REC ATF recording current adjustment
15) Title position adjustment
16) White balance adjustment
17) Title color adjustment
18) AD threshold adjustment

3-2-1. Playback Frequency Characteristics Check (VD1 Board)

Check elements for CH-A2, B2 are shown in [ ].

Mode: Playback
Alignment Tape: For frequency characteristics check (WR5-2C or WR5-6C)
Check Head: CH-A1, B1 [CH-A2, B2]
Oscilloscope CH1: Pin ③ of CN107 on VD1 board [Pin ③ of CN107]
External Trigger: Pin ② of CN107 on VD1 board [Pin ② of CN107]
Trigger Slope: +, [–]

Checking method:

Confirm that the ratio between 3.58 MHz level and 5.5 MHz level is 3:2.

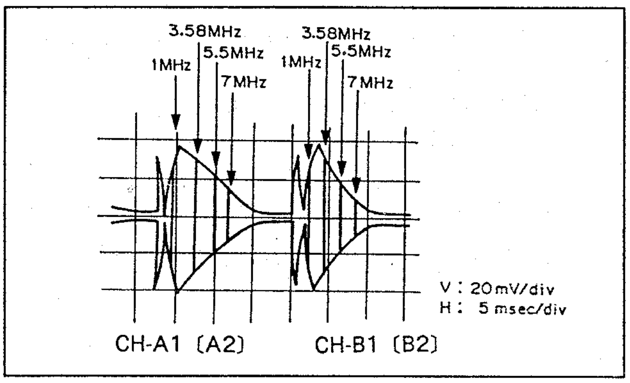


Fig. 3-10. Playback frequency characteristics

3-2-2. Flying Erase Check

Mode: Record
Input Signal: Arbitrary
Oscilloscope: TP151 (Erase check terminal)

Checking method:

Confirm that the oscillation frequency is 7.5 MHz to 9.0 MHz, and that the oscillation voltage is 7.0 Vp-p to 10.0 Vp-p.

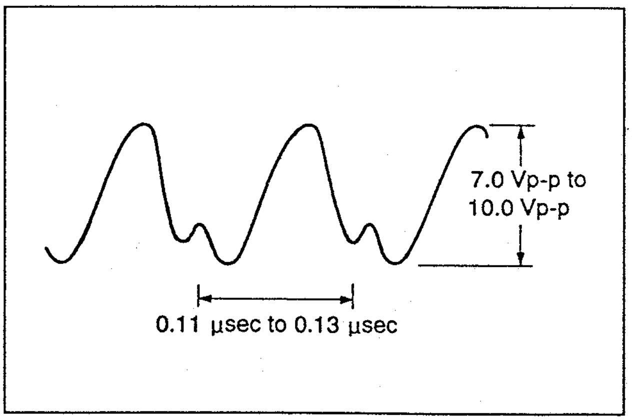


Fig. 3-11. Flying erase check

3-2-3. SYNC AGC Adjustment (VD1 Board)

Mode: E-E
Input Signal: Color bar
Oscilloscope: TP106

Adjusting method:

Adjust with VR103 to 0.5 ± 0.01 Vp-p.

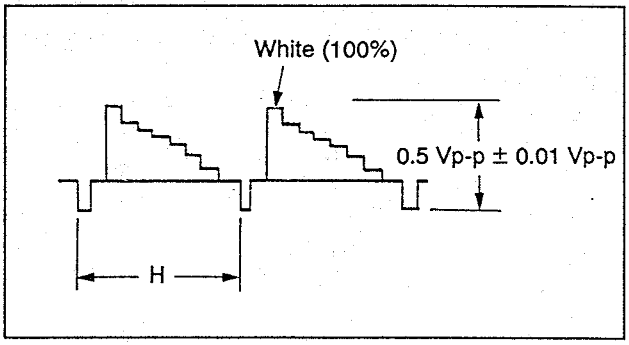


Fig. 3-12. SYNC AGC adjustment

3-2-4. Trap fo Adjustment (VD1 Board)

Mode: E-E
Input Signal: Color bar
Oscilloscope: TP145

Adjusting method:

Connect TP108 and TP101.

Adjust with VR101 so that the amplitude (residual chroma level) of green (third from left) becomes minimum (below 75 mVp-p).

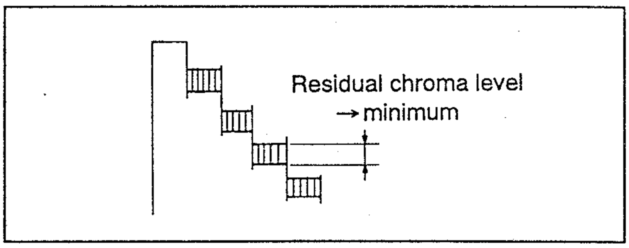


Fig. 3-13. Trap fo adjustment

3-2-5. Comb Filter Phase Adjustment (VD1 Board)

Mode: E-E
Input Signal: Color bar
Oscilloscope: TP109

Adjusting method:
Adjust with VR111 so that the amplitude (residual chroma level) of green (third from left) becomes minimum.

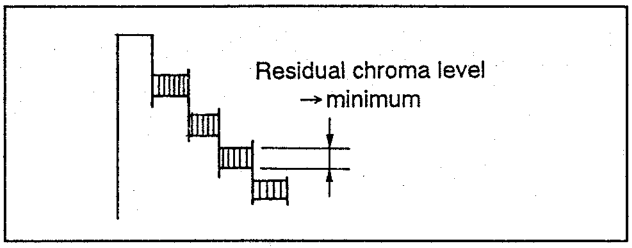


Fig. 3-14. Comb filter phase adjustment

3-2-6. Comb Filter Level Adjustment (VD1 Board)

Mode: E-E
Input signal: Color bar
Oscilloscope: TP109

Adjusting method:
Adjust with VR102 so that the amplitude (residual chroma level) of green (third from left) becomes minimum (below 20 mVp-p).

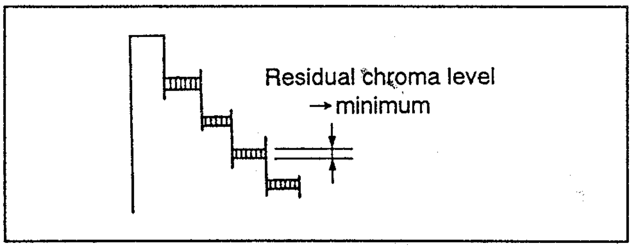


Fig. 3-15. Comb filter level adjustment

3-2-7. PB Y Level Adjustment (VD1 Board)

Mode: Playback
Alignment Tape: For operation check (WR5-5CSP)
Color bar portion
Oscilloscope: TP102

Adjusting method:
Adjust with VR109 to 0.5 ± 0.01 Vp-p.

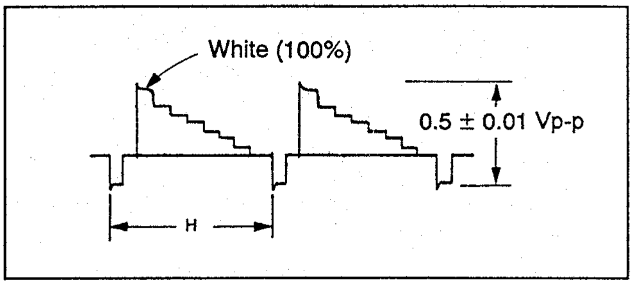


Fig. 3-16. PB Y level adjustment

3-2-8. PB LINE OUT Level Adjustment (VD1 Board)

Mode: Playback
Alignment Tape: For operation check (WR5-5CSP)
Color bar portion
Oscilloscope: TP104 (VIDEO OUT)
An AV cord should be connected, and the video output terminal should be terminated at 75Ω .

Adjusting method:
Adjust with VR106 to 1.00 ± 0.02 Vp-p.

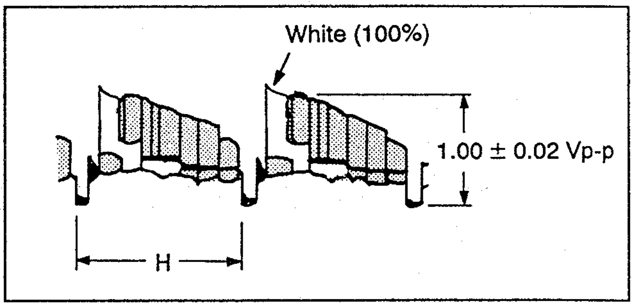


Fig. 3-17. PB LINE OUT level adjustment

3-2-13. REC AFM Recording Current Adjustment (VD1 Board)

Mode: Record
Tape: MP type
Input Signal: Color bar
Audio Input Signal: No signal
Oscilloscope: TP133

Adjusting method:
Adjust with VR133 to 40 mVp-p.

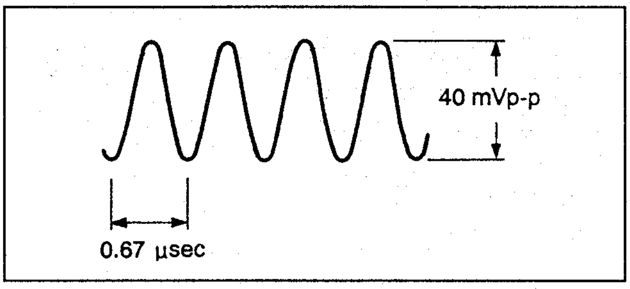


Fig. 3-22. REC AFM recording current adjustment

3-2-14. REC ATF Recording Current Adjustment (VD1 Board)

Mode: LP Record
Tape: MP type
Input Signal: Color bar (composite signal)
Oscilloscope: TP134

Adjusting method:
Adjust with VR134 to 210 mVp-p.

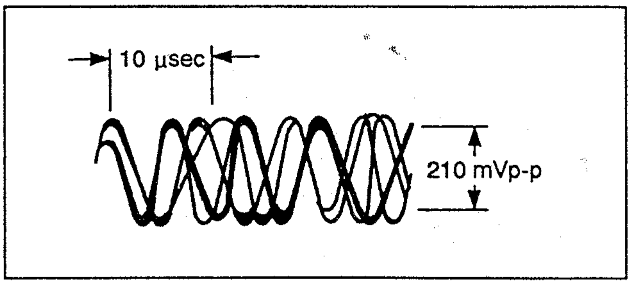


Fig. 3-23. REC ATF recording current adjustment

3-2-15. Title Position Adjustment (VD2 Board)

Subject: All black (covered with lens cap)
Measuring Equipment: Oscilloscope
Measurement Point: TP171
Adjusting Point: VC171

Adjusting method:

1) Press the title memory button to memorize "All white".
2) Adjust by turning VC171 so that the DC voltage of TP171 becomes 2.5V ± 0.1V.

3-2-16. AD Threshold Adjustment (VD2 Board)

Subject: All black (covered with lens cap)
Measuring Equipment: Digital voltmeter
Measurement Point: Pin ② of IC183 (+ probe)
Pin ③ of IC184 (– probe)
Adjustment Value: 0.25 Vdc ± 0.01 Vdc
Adjusting Point: VR184

Adjusting method:

1) Press the title memory button to memorize "All white".
2) Press the title color button to superimpose "All black".
3) Adjust by turning VR184 to 0.13 Vdc ± 0.01 Vdc.

3-2-17. White Balance Adjustment (VD2 Board)

Subject: All black (covered with lens cap)
Measuring Equipment: Vectorscope (maximum gain)
Measurement Point: Video output terminal
Adjusting Point: VR181 (B–Y)
VR182 (R–Y)

Adjusting method:

1) Press the title memory button to memorize "All white".
2) Adjust by turning VR181 and VR182 so that the distance between the center of the white vector and the origin becomes minimum.

3-2-9. Y FM Carrier Frequency Adjustment (VD1 Board)

Mode:	Record
Input Signal:	No signal
Oscilloscope:	TP131
Frequency Counter:	TP131

Adjusting method:
Adjust with VR104 to 4.39 ± 0.05 MHz.

Note: If adjusted to 4.39 MHz in no signal state, the frequency is set to 4.20 MHz when there is a signal.

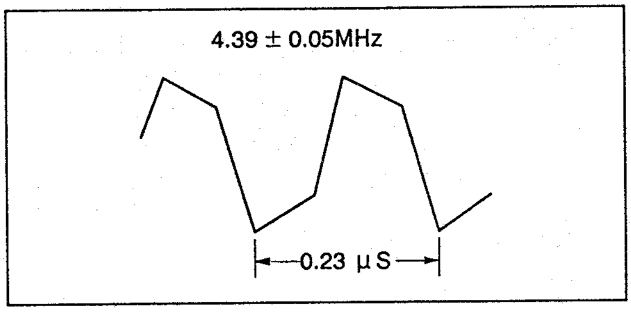


Fig. 3-18. Y FM carrier frequency adjustment

3-2-10. Y FM Deviation Adjustment (VD1 Board)

Mode:	Record and playback
Input Signal:	Color bar (Y signal only)
Oscilloscope:	TP104 (VIDEO OUT)

Note 1: An AV cord should be connected, and the video output terminal should be terminated at 75Ω .

Note 2: Sync AGC adjustment, PB Y level adjustment, PB LINE OUT level adjustment, and Y FM carrier frequency adjustment should be completed beforehand.

Adjusting method:

1) Record the color bar Y signal.
2) Play back the recorded level.
3) Check the playback level.
It should be within 1.00 ± 0.05 Vp-p.
4) When the level does not meet the specification, turn VR105 on the VD1 board as follows, and repeat 1) to 3).

	Rotating direction of VR105
When larger than specified value	Counterclockwise (↺)
When smaller than specified value	Clockwise (↻)

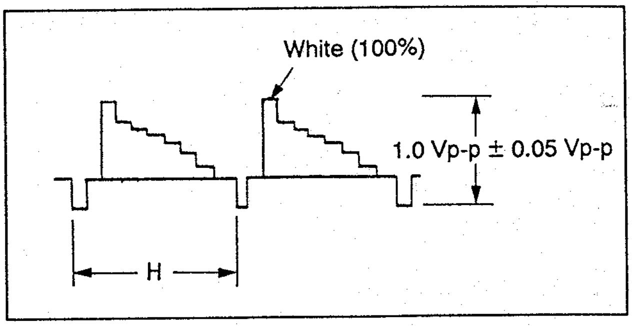


Fig. 3-19. Y FM deviation adjustment

3-2-11. REC Y Recording Current Adjustment (VD1 Board)

Mode:	Record
Tape:	MP type
Input Signal:	No signal
Oscilloscope:	TP131

Adjusting method:
Adjust with VR131 to 225 mVp-p.

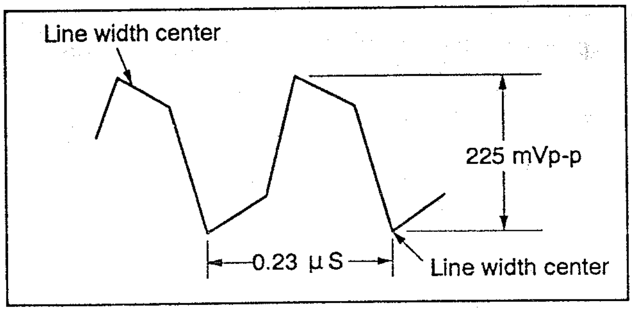


Fig. 3-20. REC Y recording current adjustment

3-2-12. REC C Recording Current Adjustment (VD1 Board)

Mode:	Record
Tape:	MP type
Input Signal:	Color bar
Oscilloscope:	TP132

Adjusting method:
Adjust with VR132 so that the burst level becomes 160 mVp-p.

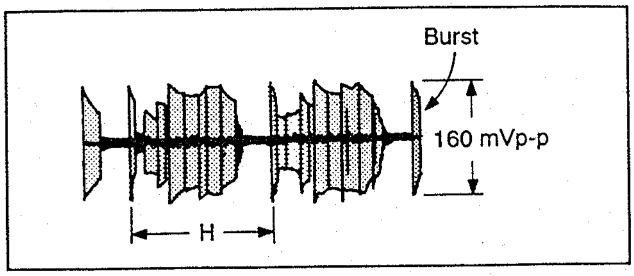


Fig. 3-21. REC C recording current adjustment

3-2-18. Title Hue Adjustment

(A) REC phase adjustment (VD1 and VD2 boards)

Mode:	Camera EE
Subject:	All black (covered with lens cap)
Measuring Equipment:	Vectorscope
Measurement Point:	Video output terminal
Adjusting Point:	VR122 (VD1)

Adjusting method:

1) Press the title memory button to memorize "All white".
2) Press the title color button to select red.
3) Adjust with VR122 (VD1) so that the center of the red vector comes to 104 ± 5°.

(B) PB phase adjustment (VD1 board)

Mode:	Playback
Alignment Tape:	For operation check (WR5-5CSP) Color bar portion
Measuring Equipment:	Vectorscope
Measurement Point:	Video output terminal
Measurement Value:	76 ± 5°
Adjusting Point:	VR121

Adjusting method:

1) Play back the alignment tape (WR5-5CP) color bar, and then press the title memory button.
2) Press the title color button to select red.
3) Adjust with VR121 so that the center of the red vector comes to 104 ± 5° from the B–Y axis.

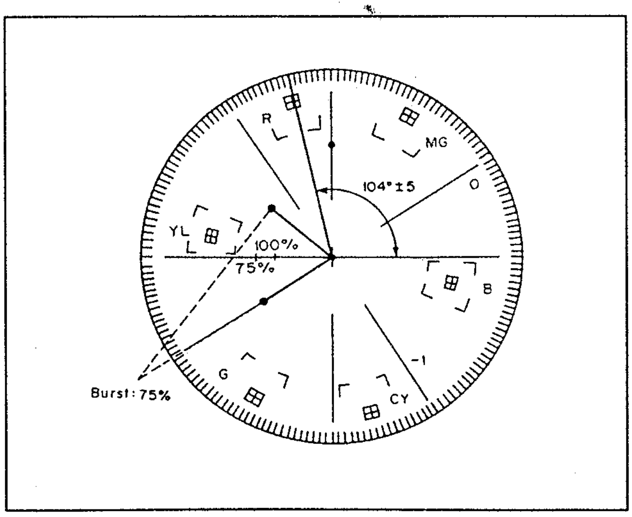


Fig. 3-24.

3-2-19. EE Mode Check

1. Binarized level
   1) Write a title on white paper and monitor it as wide as possible on the screen.
   2) Press title memory button, and confirm that the binarized level is suitable.

2. Inverting operation
   1) Press the title color button and keep it pressed for two seconds.
   2) Confirm that the contents of the title are inverted.

3. Operation of title ON/OFF button
   1) Press the title ON/OFF button.
   2) Check that the title disappears.
   3) Press the same button, and check that the title reappears.

4. Title luminance level
   1) Press the title color button to select black.
   2) Check that the black title level based on the pedestal level is 20 ± 20 mV.
   3) Press the title color button to select white.
   4) Check that the white title level based on the pedestal level is 630 ± 20 mV.

5. Vector of each title
   1) Check that each vector center of all white, all blue, all red, all yellow, and all black is in the position as shown in the figure.

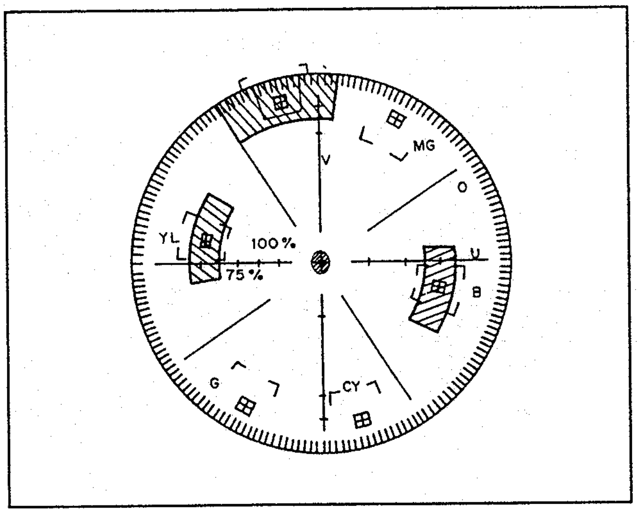


Fig. 3-25.

6. Back up
   1) Turn off the power of the main unit, and remove the AC adapter or the battery.
   2) Reconnect the AC adapter or the battery, and turn on the power of the main unit.
   3) Press the title ON/OFF button, and confirm that the memorized title picture appears.

3-2-20. PB Mode Check

1. Memory operation
   1) Play back the alignment tape (WR5-5CSP) color bar, and then press the title memory button.
   2) Observe the monitor screen, and confirm that the portion till the red has been memorized as a title.

2. Title luminance level
   1) Press the title color button to select black.
   2) Check that the black title level based on the pedestal level is 0 ± 20 mV.
   3) Press the title color button to select white.
   4) Check that the white title level based on the pedestal level is 630 ± 20 mV.

3. Vector of each title
   1) Check that each vector center of all white, all blue, all red, all yellow, and all black are in the position as shown in the figure.

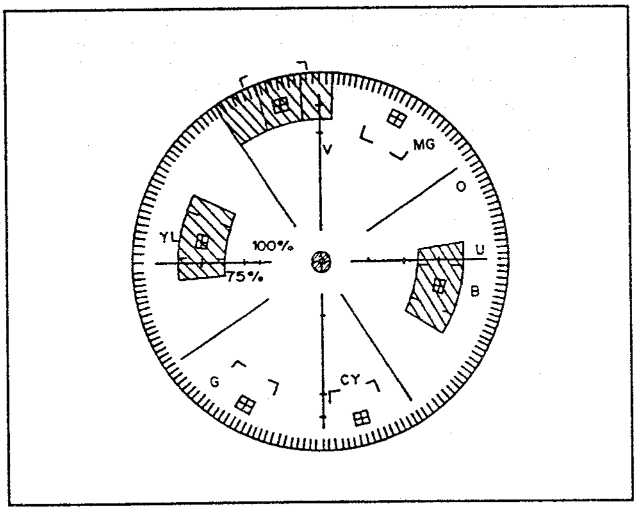


Fig. 3-26.

3-3. AUDIO SYSTEM ADJUSTMENT

[Measuring equipments connection]

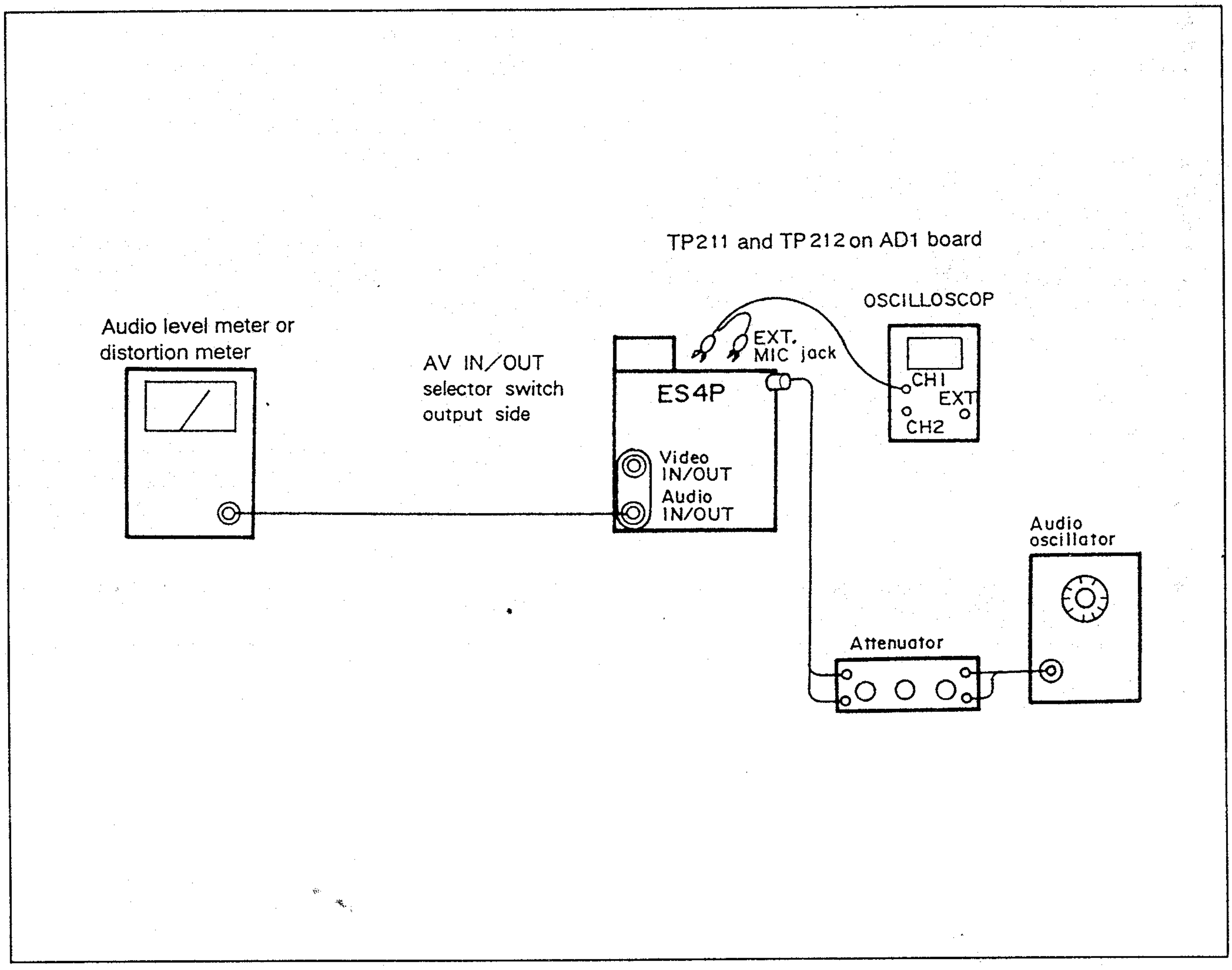

TP211 and TP212 on AD1 board
OSCILLOSCOP
Audio level meter or distortion meter
AV IN/OUT selector switch output side
EXT. MIC jack
ES4P
CH1
EXT
CH2
Video IN/OUT
Audio IN/OUT
Audio oscillator
Attenuator

Fig. 3-27.

Adjustment order:

1) fo adjustment
2) Deviation adjustment
3) Overall level check
4) Overall S/N check

3-3-1. fo Adjustment (AD1 Board)

Mode: Playback
Playback Tape: For operation check (WR5-5CSP)
Audio Input: No signal
Osilloscope: HOT: TP211, GND: TP212

Adjusting method:

1) Connect the oscilloscope to TP211 and TP212 on the AD1 board on the front of the unit the then play the operation check tape back.
2) Set the oscilloscope to AC 50 mV/div, 0.5 μsec/div and adjust VR202 on the AD board so that playback FM waveform has the same amplitude in high frequency range and low frequency range.
3) Expanding sweep of the time base to 0.1 μsec/div will.

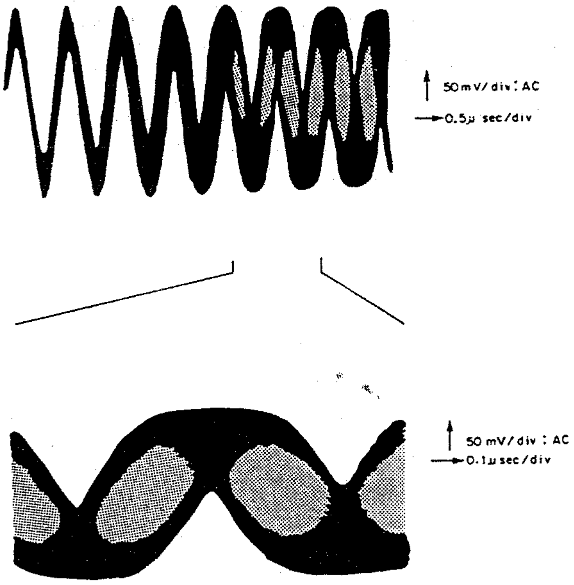


Fig. 3-28.

3-3-2. Deviation Adjustment (AD1 Board)

Mode: Play back
Playback Tape: For operation check (WR5-5CSP)

Adjusting method:

Adjust with VR201 on the AD1 board so that the audio output level is –6 ± 1dBs.

Note: The adjustments in 3-3-1 and 3-3-2 should be done in this order.

3-3-3. Overall Level Check

Mode: Self-recording/playing back (SP)
Tape: MP type
Audio Input: 1 kHz, –66 dBs

Checking method:

1) Record.
2) Play back the recorded portion.
3) Confirm that the audio output level is –6 ± 3 dBs and the distortion ratio is less than 3%.

Note: Turn on the HPF button (400 Hz) of the distortion meter.

3-3-4. Overall S/N Check

Mode: Self-recording/playing back (SP)
Tape: MP type
Audio Input: Short-circuited at the audio input end (No signal)

Checking method:

1) Record.
2) Play back the recorded portion.
3) Confirm that the (playback level in 3-3-3.) dBs–(playback level in this step) dBs is over 35 dB.
(In case of JIS A audio corrections, it should be over 40 dB.)

Note: Since the audio input level is extreme low, be careful of noises such as inductive hum, etc.

4. EVF ADJUSTMENTS

4-1. Equipment Required

1. Frequency counter
2. Alignment tape
   For performance check: WR5-5CSP
   Part code: 8-967-995-47

4-2. Adjustment Priority

Note: The following adjustments must be made in the following order.

1. Horizontal frequency oscillation adjustment
2. Finder temporary adjustment
3. Centering adjustment
4. Horizontal size and tilt adjustments
5. Vertical size adjustment
6. Brightness adjustment
7. Focus adjustment

4-3. Horizontal Frequency Oscillator Adjustment

Mode:	E-E
Input signal:	none
Frequency counter:	Pin ⑭ of IC1 shown in Fig. 4-1.

[Adjustment procedure]

Adjust VR1 for 15800 ± 100 Hz.

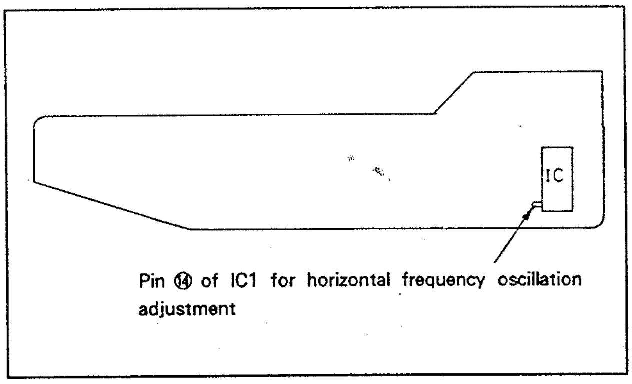

IC
Pin ⑭ of IC1 for horizontal frequency oscillation adjustment

Fig. 4-1.

4-4. Finder Temporary Adjustment

Mode:	Play
Alignment tape:	Performance check tape (WR5-5CSP) (Monoscope)

[Adjusting procedure]

1) Adjust VR5 (BRIGHT) for a suitable brightness.
2) Adjust VR2 (V SIZE) for suitable size of picture.
3) Adjust VR4 (FOCUS) for a suitable screen focus.
4) Shift DY in the direction of the arrow of Fig. 4-2. to minimize gap B.

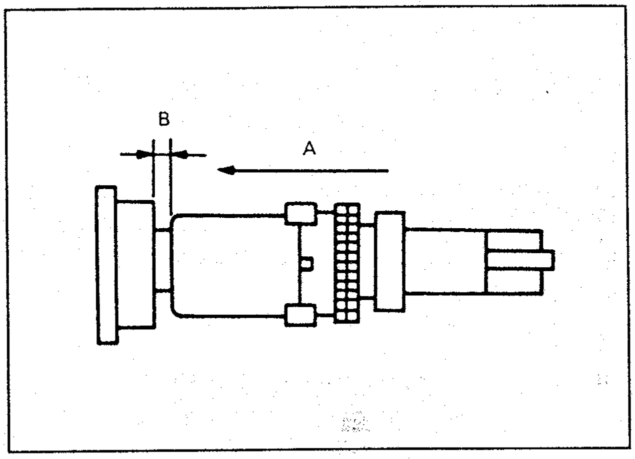


Fig. 4-2

4-5. Centering Adjustment

Mode:	Play
Alignment tape:	Performance check tape (WR5-5CSP) (Monoscope)

[Adjustment procedure]

1) Rotate centering magnet for a centered picture.
2) Lock the centering magnet with lacquer enamel.

4-6. Horizontal Size and Tilt Adjustment

1) Rotate the deflection coil so that a suitable screen size and tilting angle of the picture is 0 ± 1.5° or less.
2) Turn the yoke clamp clockwise to secure the deflection coil.

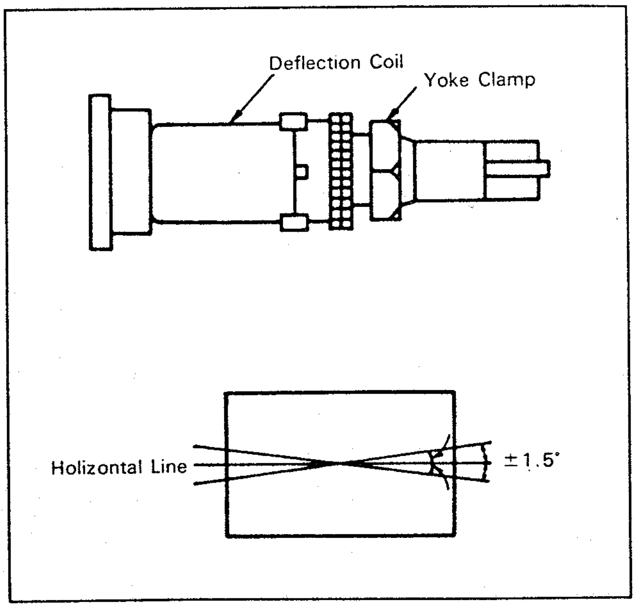


Fig. 4-3

4-7. Vertical Size Adjustment

Mode: Play
Alignment tape: Performance check tape (WR5-5CSP) (Monoscope)

[Adjustment Procedure]

Adjust VR2 so that A and B are equal to each other in size as shown in Fig. 4-4. (circled pattern has true roundness).

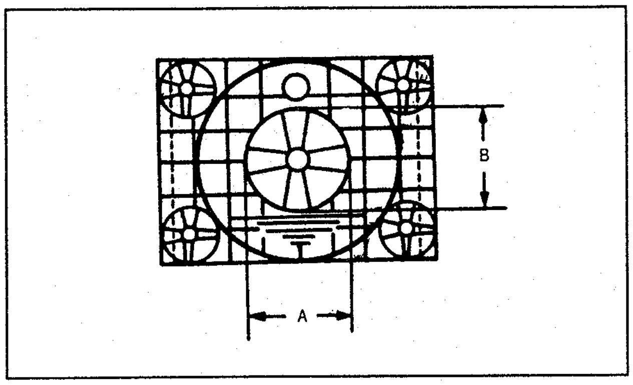


Fig. 4-4

4-8. Brightness Adjustment

Mode: Play
Alignment tape: Performance check tape (WR5-5CSP) (Monoscope)

[Adjustment Procedure]

Adjust VR5 for a suitable intensity.

4-9. Focus Adjustment

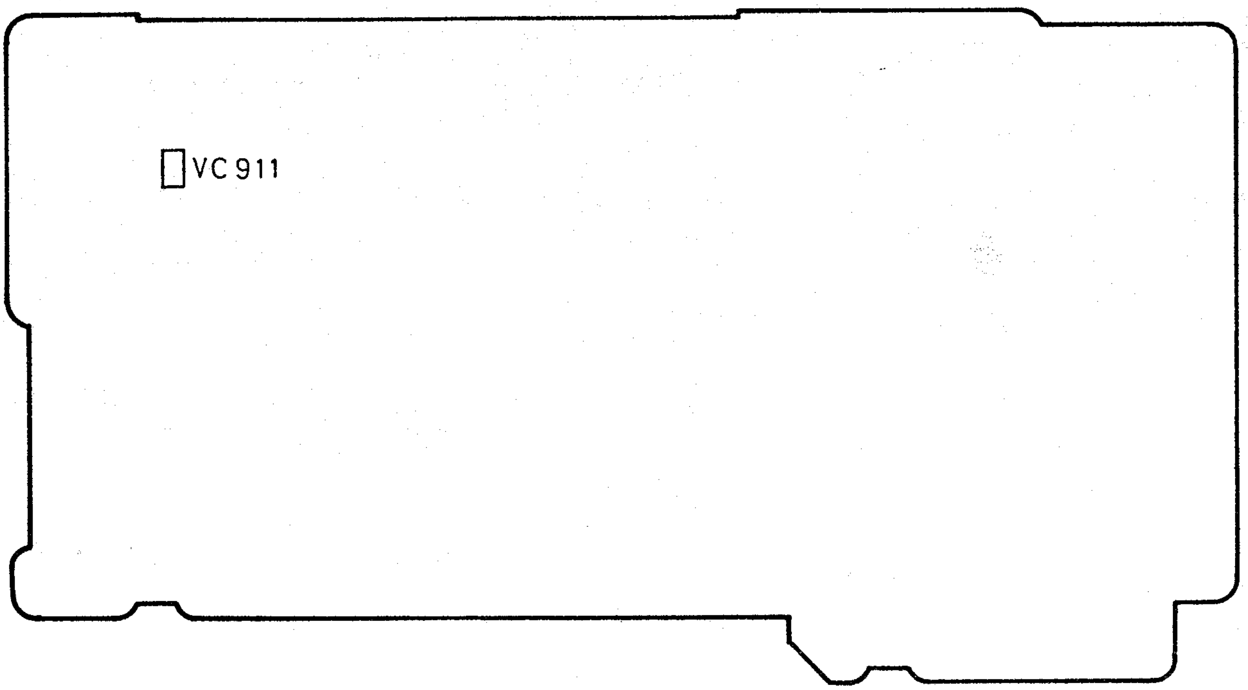
Mode: Play
Alignment tape: Performance check tape (WR5-5CSP) (Monoscope)

[Adjustment Procedure]

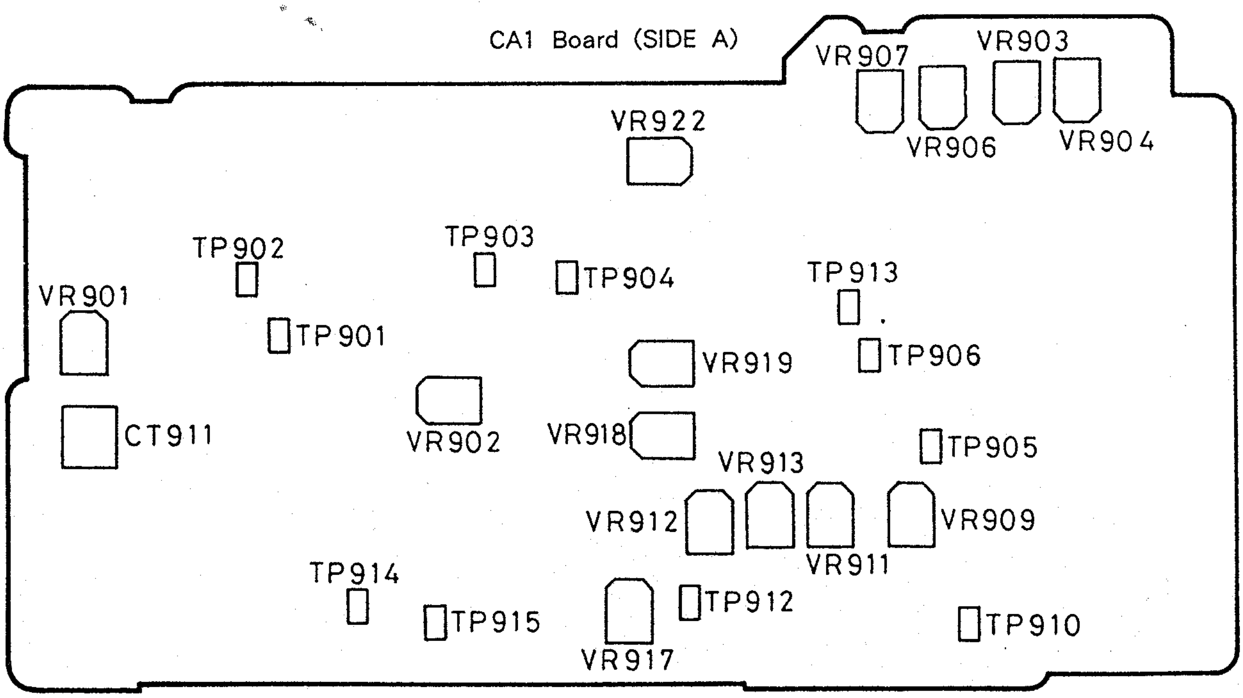
Adjust VR4 for the highest resolution of a monoscope pattern.

5. VR, TP LOCATION

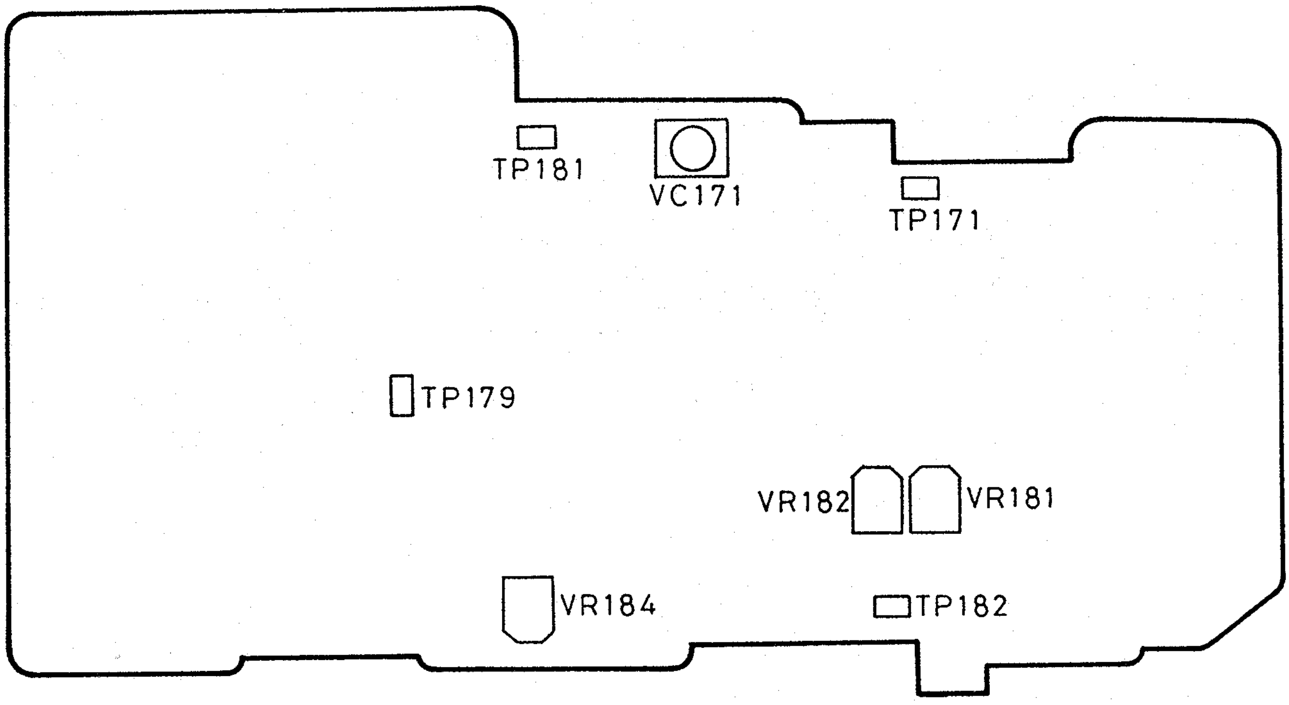
CA1 Board (SIDE B)



CA1 Board (SIDE A)


VR907
VR903
VR906
VR904
VR922
TP902
TP903
TP904
TP913
VR901
TP901
TP906
VR919
CT911
VR902
VR918
TP905
VR913
VR912
VR909
VR911
TP914
TP915
TP912
TP910
VR917

VD2 Board (SIDE A)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VR182
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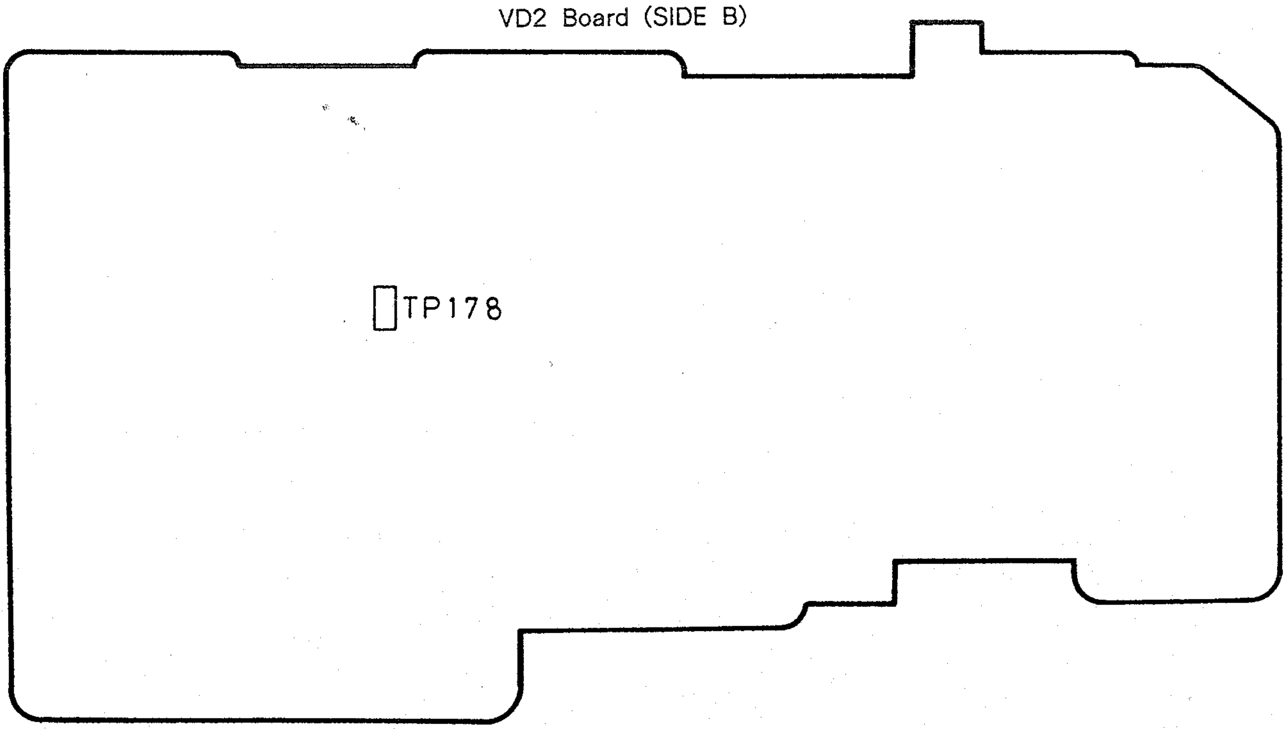
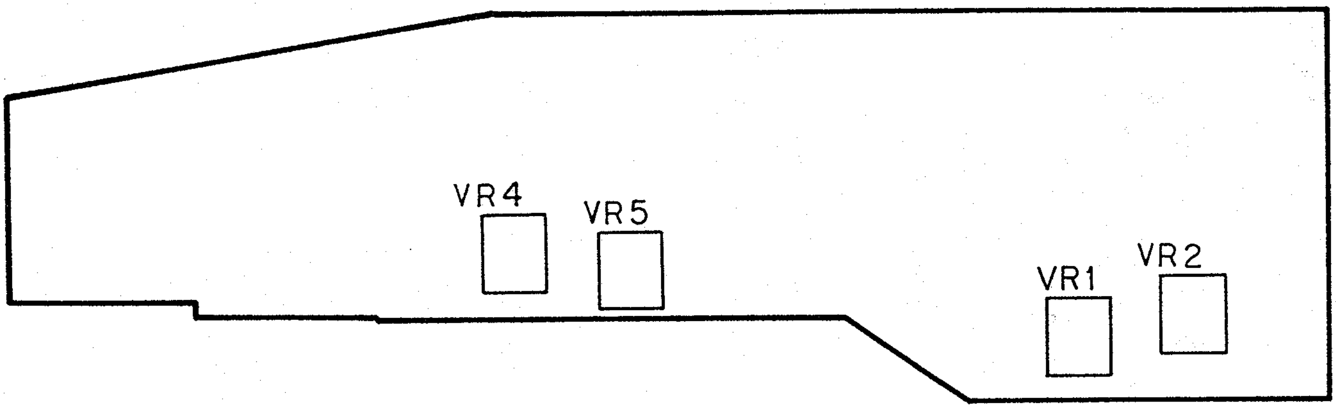
VR184
TP182

VD2 Board (SIDE B)



VF1 Board (SIDE A)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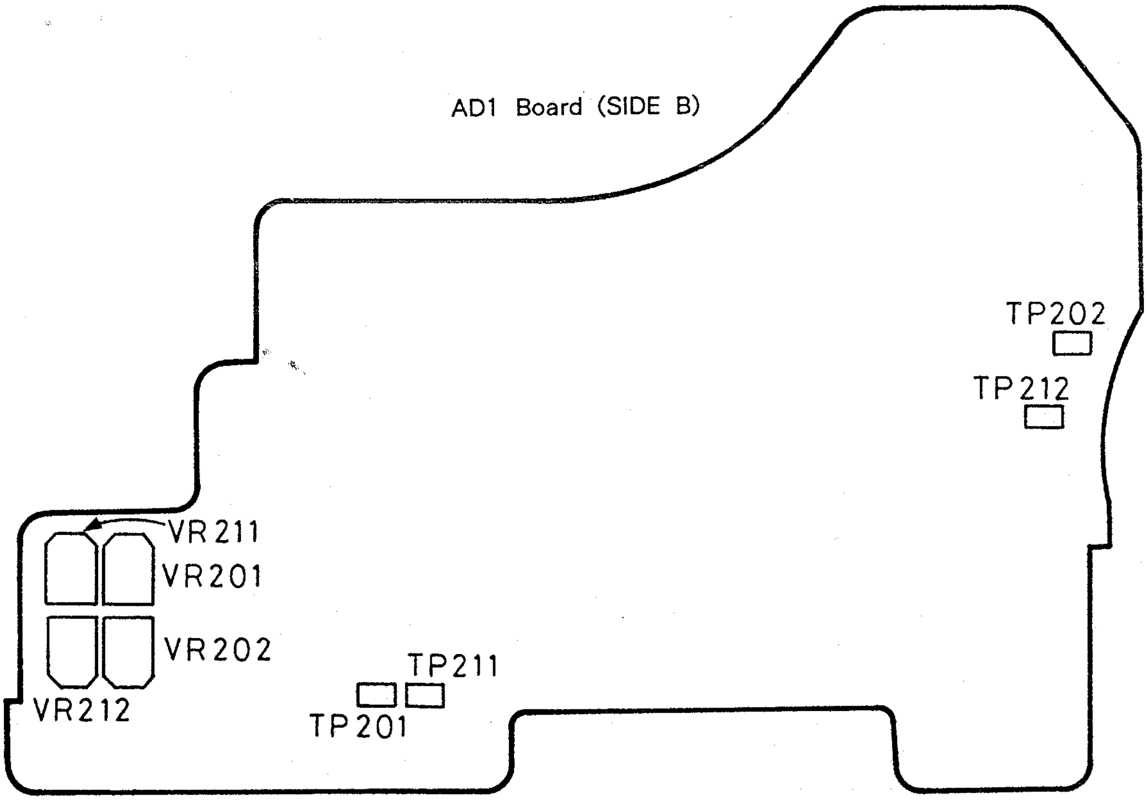
VR5
VR1
VR2

AD1 Board (SIDE B)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VR211
VR201
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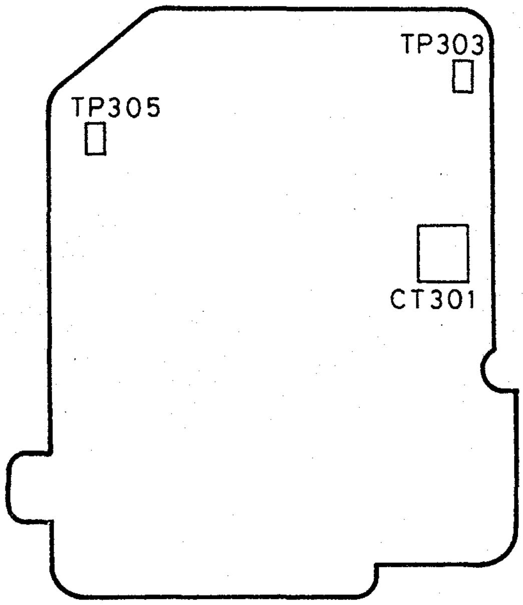
VR212
TP211
TP201

SY1 Board (SIDE A)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TP305
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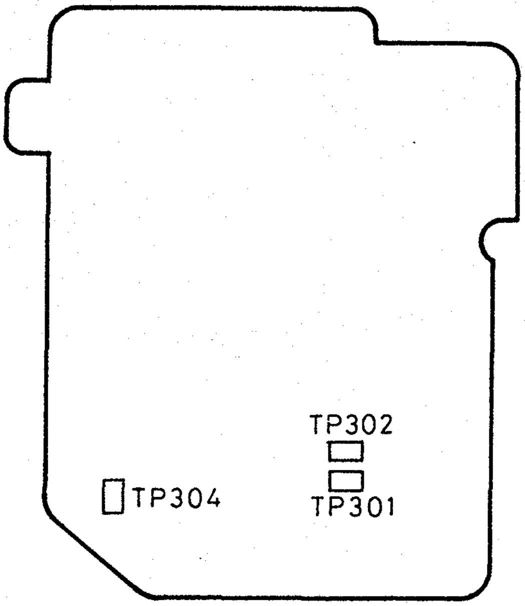
SY1 Board (SIDE B)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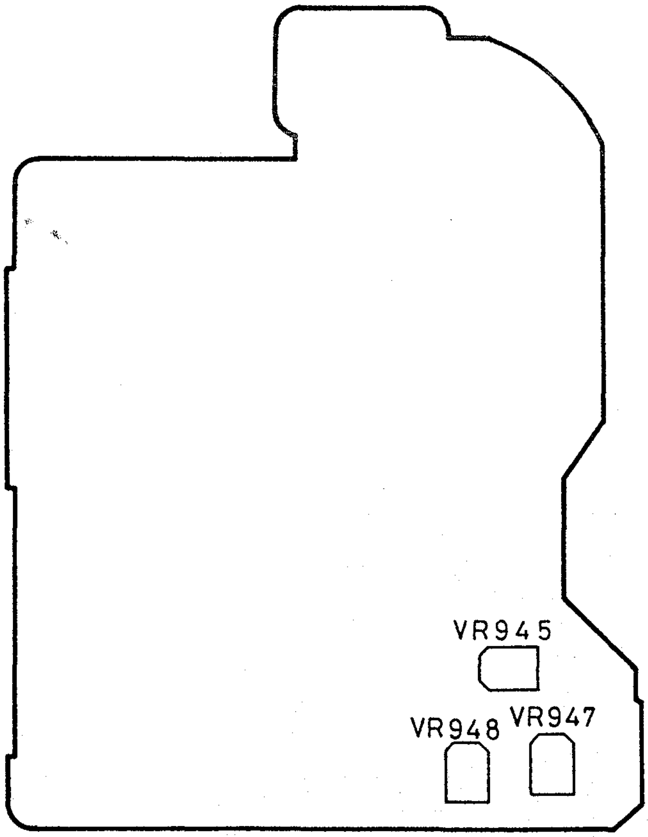
TC1 Board (SIDE A)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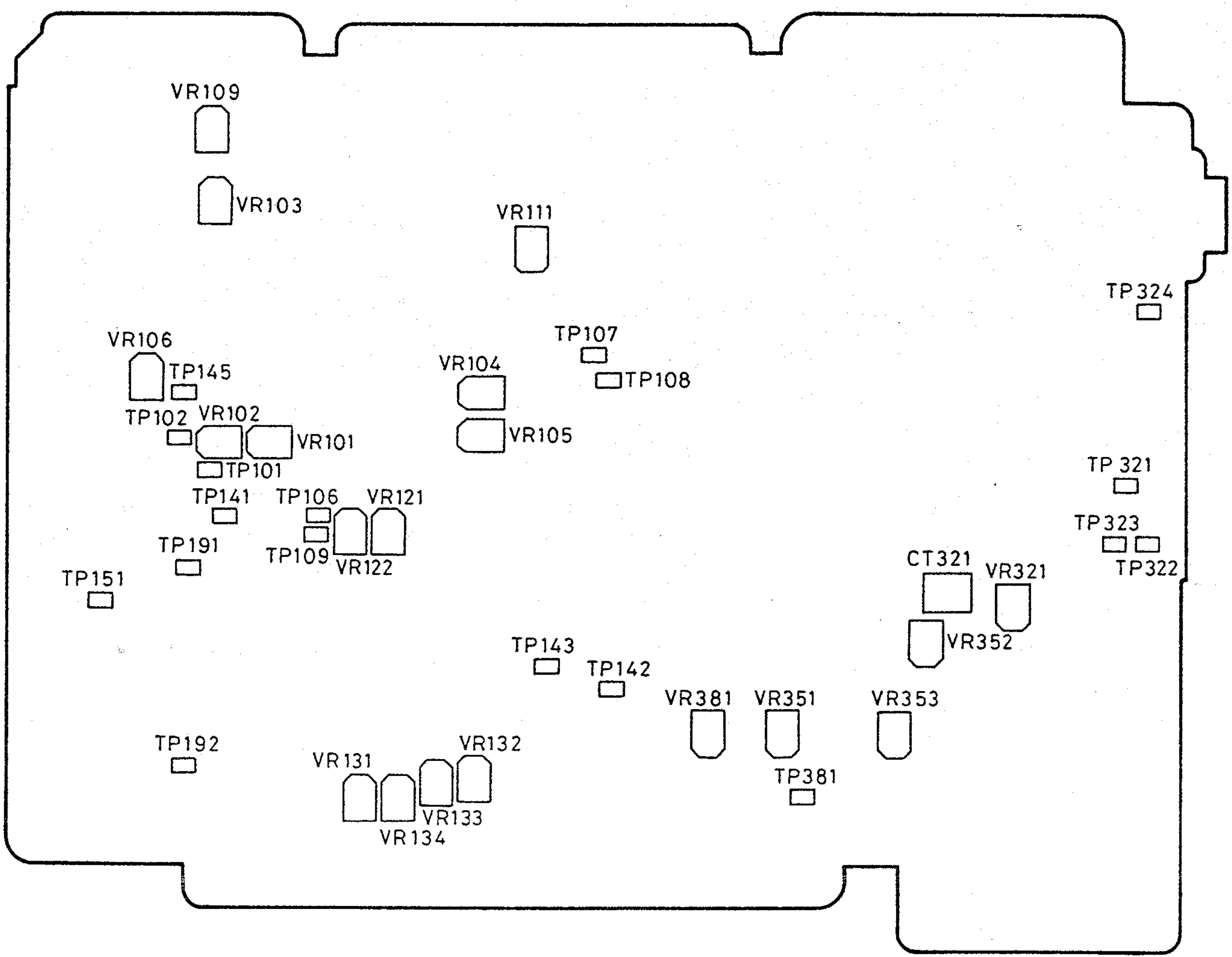
VR948
VR947

VD1 Board (SIDE A)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TP102
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VR101
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TP106
VR121
TP323
TP191
TP109
VR122
CT321
VR321
TP322
TP151
VR352
TP143
TP142
VR381
VR351
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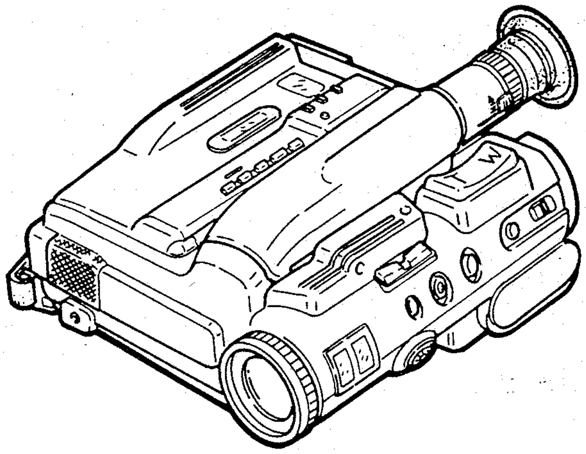
TP192
VR132
VR131
TP381
VR133
VR134

SANYO

PARTS LIST

8mm Camcorder

VM-ES88P



PRODUCTION CODE No.
126 018 06 (SWITZERLAND)
126 018 07 (ITALY)
126 018 09 (SPAIN)
126 018 10 (M-EAST)
126 018 19 (ENGLAND)
126 018 23 (AUSTRALIA)
126 018 29 (GERMANY)

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PRODUCT SAFETY NOTICE

The components designated by a symbol (⚠) in this schematic diagram designates components whose value are of special significance to product safety. Should any component designated by a symbol need to be replaced, use only the part designated in the Parts List. Do not deviate from the resistance wattage and voltage rating shown.

Note: The parts codes of accessories differ depending on destination.
Therefore the following ID codes are applied.

VM-ES88P
- Switzerland : SW
- M-East : ME
- Germany : G
- Italy : I
- England : E
- Australia : A
- Spain : SP

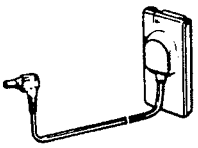
REFERENCE No. WM-550086

ES4P/G, E, A, SP, ME, SW, I

ACCESSORIES

LOCATION	PARTS NO.	DESCRIPTION
1	636 033 4687	CORR CASE INNER(G)
2	636 032 7986	CORR.CASE INNER(E)
3	636 033 1457	CORR.CASE INNER(A)
4	636 032 2707	CORR.CASE INNER(SP)
5	636 032 2714	CORR.CASE INNER(ME)
6	636 032 0871	CORR.CASE INNER(SW)
7	636 032 0888	CORR.CASE INNER(I)
8	636 030 1245	CUSHION INNER.A
9	636 030 1252	CUSHION INNER.B
10	636 033 4311	INSTRUCTION MANUAL(G) (ENGLISH/FRENCH/GERMAN)
OR	636 033 4328	INSTRUCTION MANUAL(G.I) (ITALY/NETHERLANDS/SPANISH)
11	636 032 6972	INSTRUCTION MANUAL(E)
12	636 033 0498	INSTRUCTION MANUAL(A)
13	636 031 9769	INSTRUCTION MANUAL(SP)
14	636 031 9776	INSTRUCTION MANUAL(ME)
15	636 031 9714	INSTRUCTION MANUAL(SW) (ENGLISH/FRENCH/GERMAN)
OR	636 031 9721	INSTRUCTION MANUAL(SW) (ITALY/NETHERLANDS/SPANISH)
16	636 002 7732	CORD.DC OUT PUT(G.E.A.SP.ME.I)
17	636 024 7239	CABLE.RF(G.E.A.SP.ME.I)
18	636 033 4861	CABLE.RCA(SW)
OR	636 031 2302	CABLE.RCA(SW)
19	636 032 0987	ADAPTER.RF(G.SP.ME.I)
20	636 032 8129	ADAPTER.RF(E)
21	636 033 2379	ADAPTER.RF(A)
22	636 030 1344	ADAPTER.AC(G.SP.ME.SW.I)
23	636 030 1351	ADAPTER.AC(E)
24	636 030 1375	ADAPTER.AC(A)
25	636 022 2458	21/2PIN AV ADAPTOR(SW)
26	636 032 2684	ASSY BELT(G.SP.ME.SW.I)
27	636 032 5241	REMOCON.WIRELESS SRN
28	636 032 2646	ASSY.SOFT CASE PACKING

⑯



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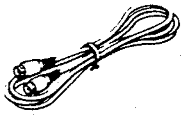

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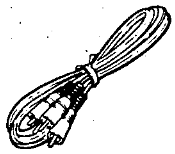

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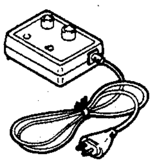

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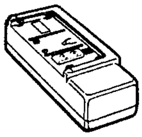

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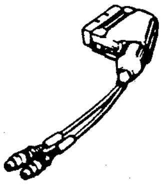

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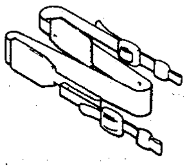

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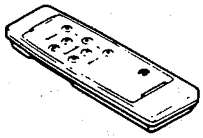

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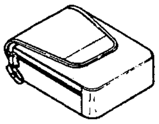
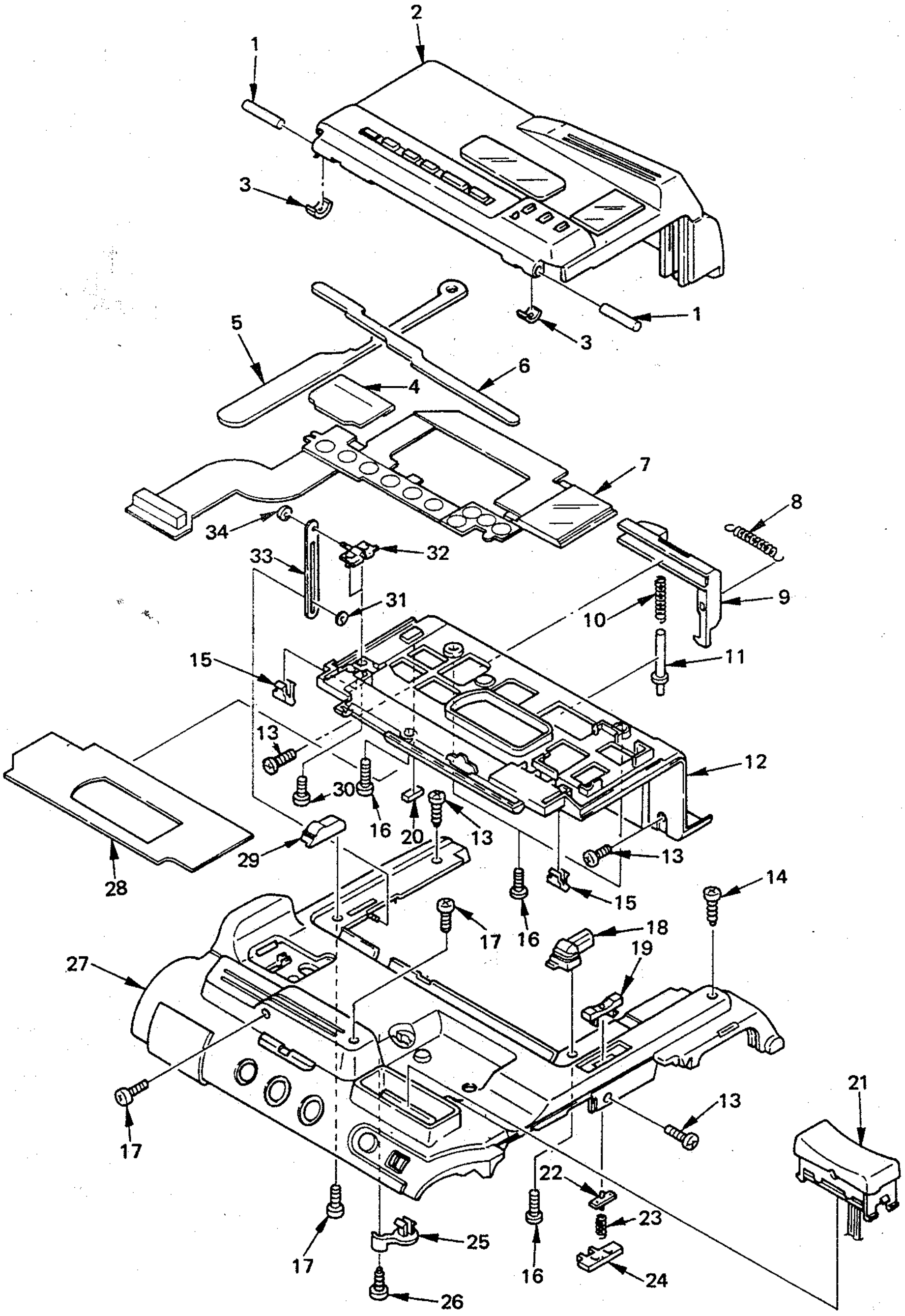


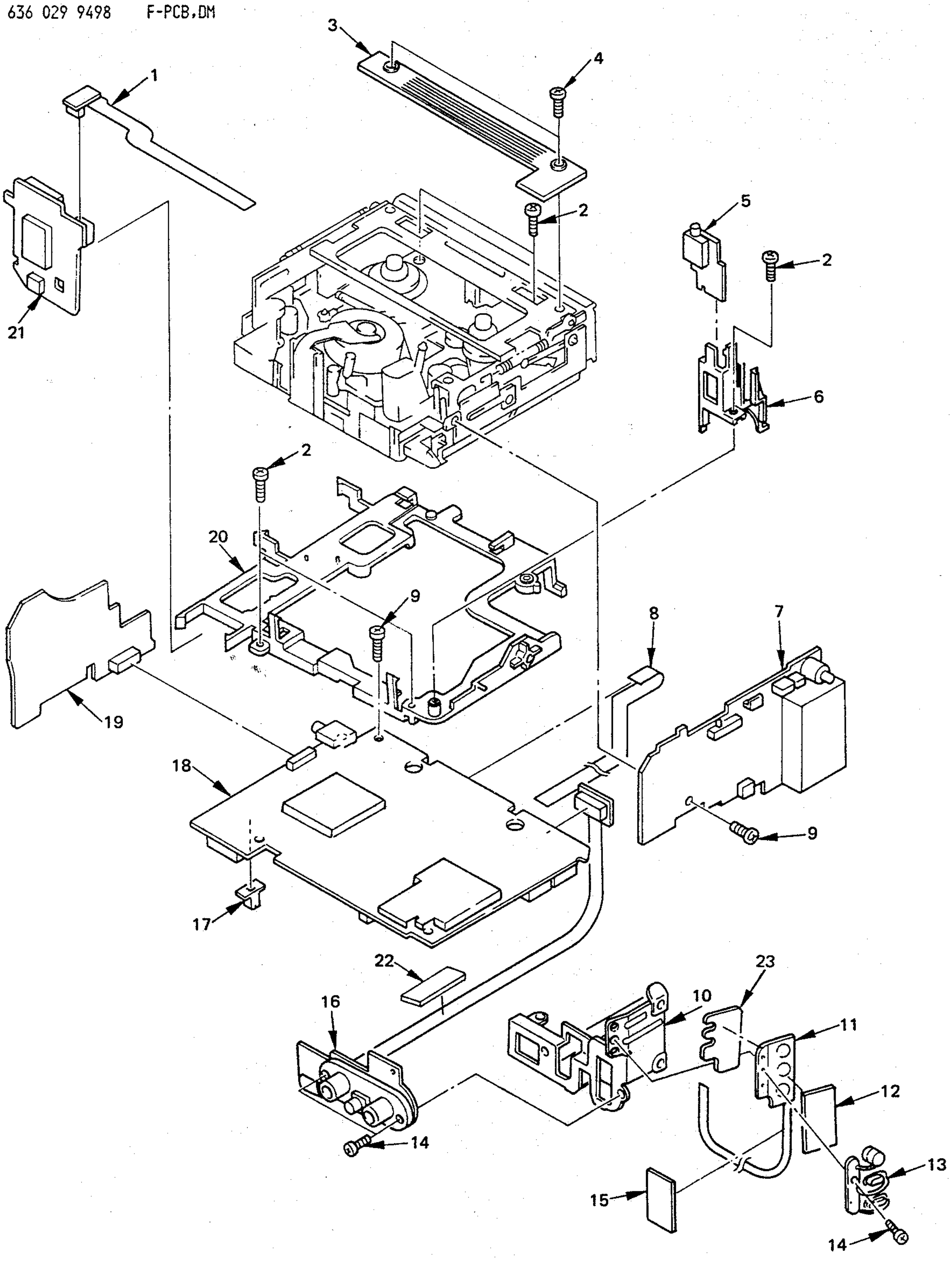
CABINET 1

LOCATION	PARTS NO.	DESCRIPTION
1	636 030 0958	PIN,A
2	636 033 8388	ASSY,DOOR,A
3	636 030 1160	SLIDE,B
4	636 031 7307	INSULATOR,J
5	636 031 7291	EARTH,M
6	636 031 6522	EARTH,L
7	636 029 9474	F-PCB,LCD
8	636 030 0903	T,SPRING,A
9	636 030 0569	KNOB,B
10	636 031 4337	C,SPRING,C
11	636 031 4344	PINE,E
12	636 030 0330	DOOR,B
13	411 020 0800	SCR PAN PCS 1.7X4
14	411 020 2101	SCR PAN PCS 1.7X6
15	636 030 1177	SLIDE,C
16	411 133 2203	SCR S-TPG PAN PCS 2X4
17	411 133 2302	SCR S-TPG PAN PCS 2X6
18	636 030 0828	HINGE,B
19	636 030 0552	KNOB,A
20	636 030 7407	SPACER
21	636 030 5823	SW,ZOOM
22	636 030 0514	BUTTON,A
23	636 030 0910	C,SPRING,A
24	636 030 0941	SLIDE,A
25	636 030 0729	HOLDER,C
26	411 099 9209	SCR PAN PCS 2X6
27	636 032 0673	ASSY,CABINET,TOP
28	636 031 4443	BLIND,B
29	636 030 0811	HINGE,A
30	411 099 0701	SCR PAN PCS 1.7X3
31	412 028 3008	SPECIAL WASHER
32	636 030 6073	ASSY,BRACKET,F
33	636 030 0927	PLATE
34	412 028 2902	SPECIAL WASHER



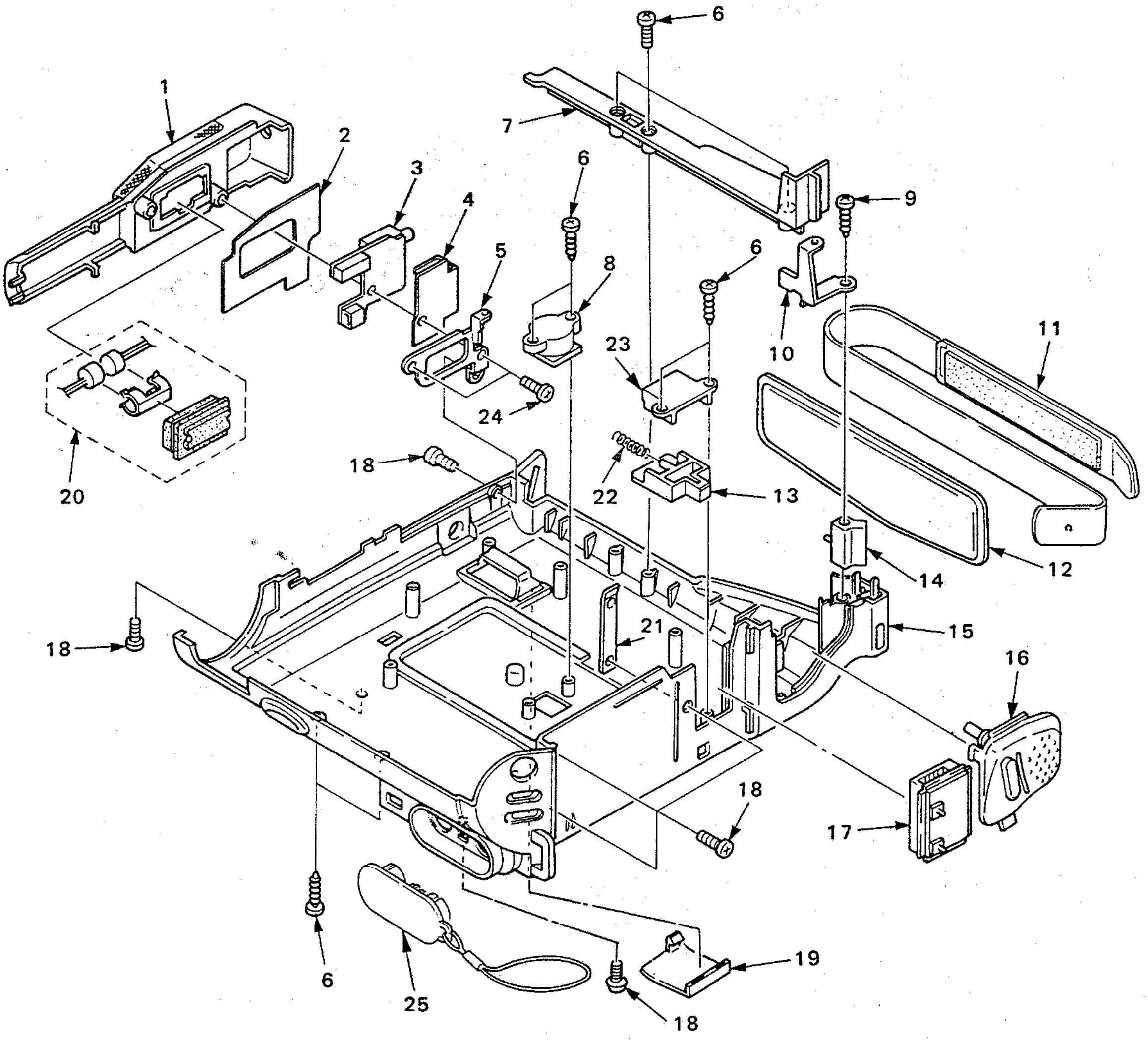
CABINET 2

LOCATION	PARTS NO.	DESCRIPTION
1	636 033 6148	F-PCB,SY-1&TC-1
2	411 133 2302	SCR S-TPG PAN PCS 2X6
3	636 030 0293	COVER,A
4	411 099 0701	SCR PAN PCS 1.7X3
5	636 031 8595	COMPL,SY-2
6	636 031 7284	HOLDER,H
7	636 032 0574	COMPL,VD-2
8	636 029 9320	F-PCB,VD-1&CA-1
9	411 133 2203	SCR S-TPG PAN PCS 2X4
10	636 030 0682	BRACKET,G
11	636 029 9498	F-PCB,DM
12	636 032 3100	INSULATOR,M
13	636 030 7193	ASSY HINGE BUTTON,G
14	411 020 0800	SCR PAN PCS 1.7X4
15	636 032 5364	INSULATOR,N
16	636 032 0857	AV TERMINAL UNIT
17	636 030 0613	KNOB,G
18	636 032 0567	COMPL,VD-1
19	636 032 0581	COMPL,AD-1
20	636 029 8101	HOLDER,A
21	636 031 8588	COMPL,SY-1
22	636 033 5509	SHIELD,A
23	636 034 0718	SPACER,M



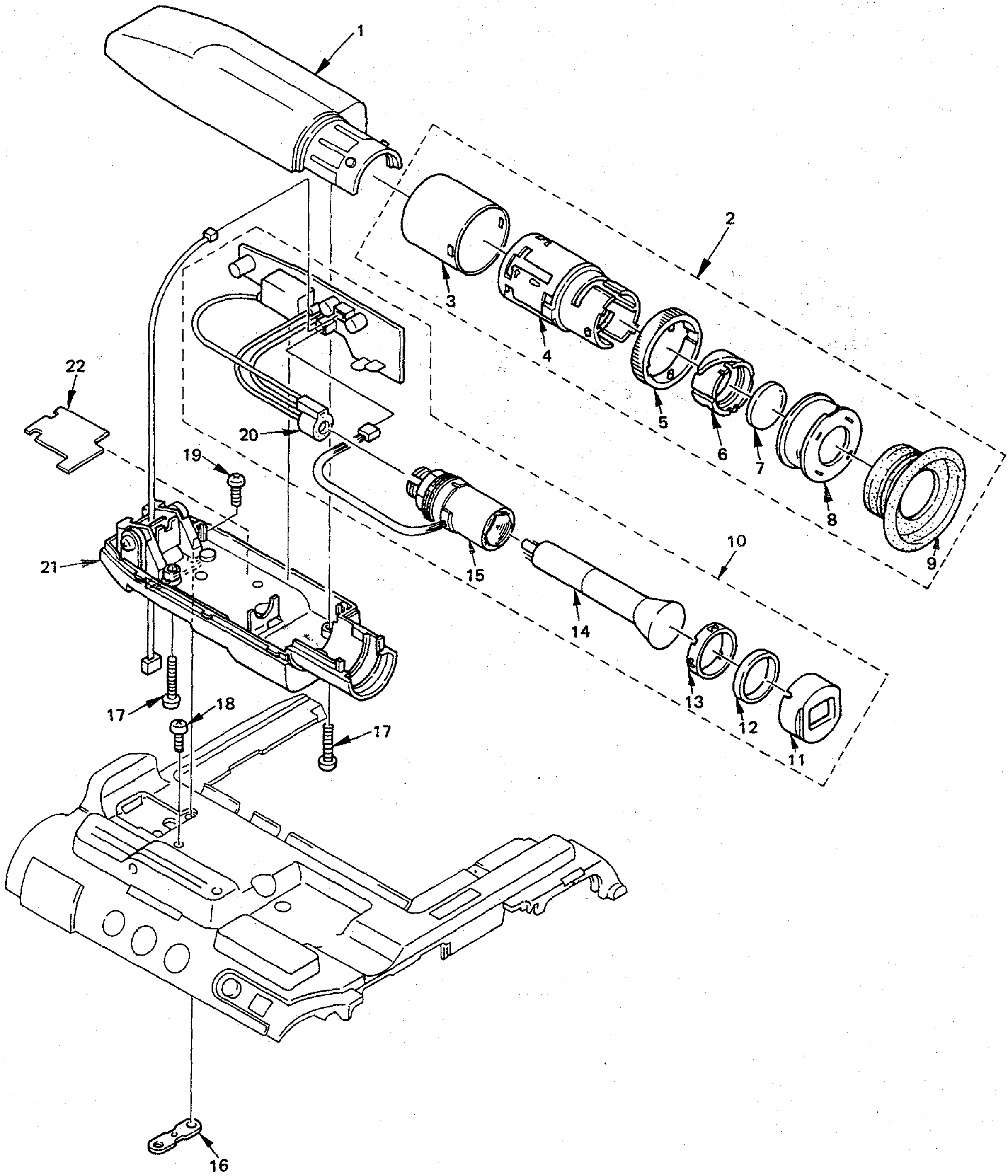
CABINET 3

LOCATION	PARTS NO.	DESCRIPTION
1	636 032 1861	ASSY ESCUTCHEON CLEAR
2	636 031 3897	INSULATOR,I
3	636 032 0598	COMPL,AD-2
4	636 031 3859	SCREEN,D
5	636 030 0651	BRACKET,D
6	411 133 2302	SCR S-TPG PAN PCS 2X6
7	636 030 0880	BLIND
8	636 030 3409	ASSY,STAND
9	411 133 2401	SCR S-TPG PAN PCS 2X8
10	636 030 0712	BRACKET,J
11	636 031 3811	ASSY,BELT
12	636 022 5114	ASSY,PAD
13	636 030 0590	KNOB,E
14	636 030 0750	HOLDER,F
15	636 032 0710	ASSY,CABI,BOTTOM
16	636 031 5914	ASSY ESCUTCHEON
17	636 031 0490	BATTERY CONNECTOR UNIT
18	411 020 0800	SCR PAN PCS 1.7X4
19	636 030 0316	LID
20	636 030 1474	ASSY,MICROPHONE
21	636 030 0705	BRACKET,I
22	636 014 6365	SPRING COIL
23	636 030 0736	HOLDER,D
24	411 137 3800	SCR S-TPG PAN PCS 2X5
25	636 034 0763	ASSY,COVER,B



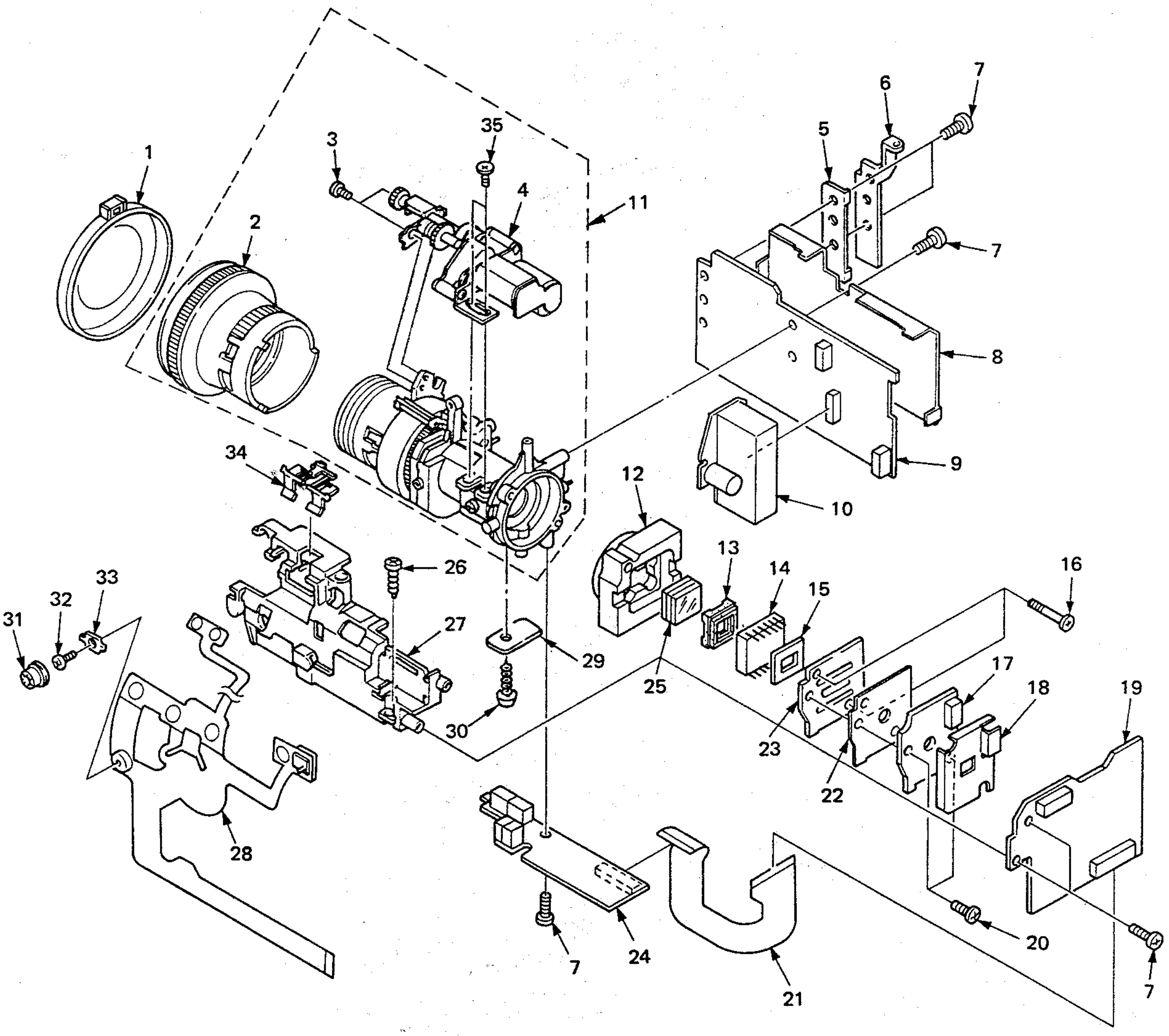
VIEWFINDER

LOCATION	PARTS NO.	DESCRIPTION
1	636 032 1625	ASSY,CABINET,A
2	636 031 2715	COMPL,SLEEVE
3	636 030 2914	SLEEVE,B
4	636 030 2921	SLEEVE,A
5	636 030 2907	KNOB
6	636 030 2884	HOLDER,A
7	636 030 2969	LENS
8	636 030 2860	COVER
9	636 030 2891	HOOD
10	636 032 0956	COMPL,VF-1
11	636 030 2877	HOLDER,B
12	636 030 2938	RING,A
13	636 030 2945	RING,B
14	414 006 2904	CRT M01KGG007WB
15	636 031 4856	YOKE,DEFLECTION
16	636 030 0620	BRACKET,A
17	411 125 5809	SCR TPG PAN PCS 1.7X8
18	411 020 0800	SCR PAN PCS 1.7X4
19	411 099 9209	SCR PAN PCS 2X6
20	636 031 5037	CORD
21	636 031 2739	ASSY,CABINET,B
22	636 033 9545	SHIELD PLATE



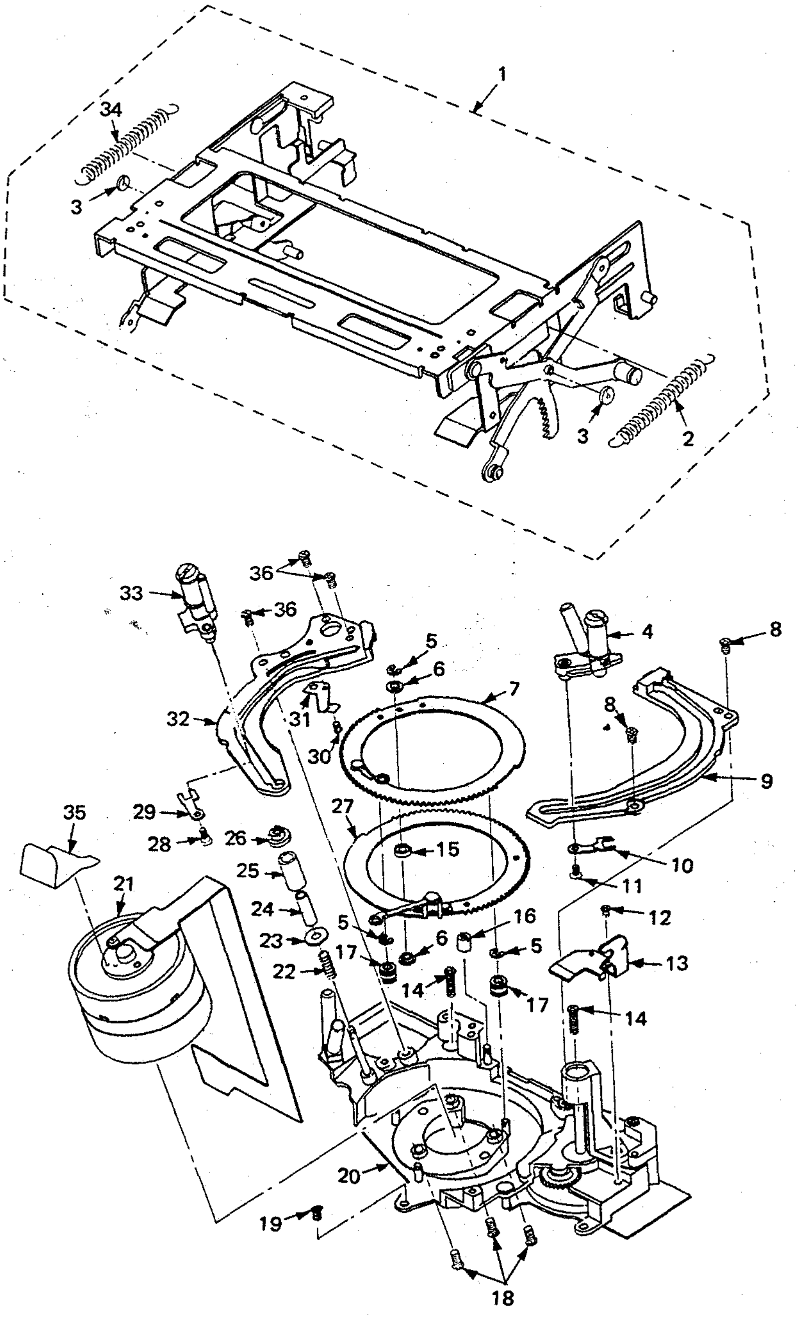
CAMERA

LOCATION	PARTS NO.	DESCRIPTION
1	636 030 4116	CAP
2	636 032 2981	COMPL,COVER
3	411 137 9604	SCR TPG PAN PCS 1.7X3
4	636 032 1908	LENS,MOTOR
5	636 032 0277	INSULATOR,K
6	636 030 0637	BRACKET,B
7	411 133 2203	SCR S-TPG PAN PCS 2X4
8	636 030 1085	SHIELD PLATE,E
9	636 031 8618	COMPL,CA-1
10	636 031 8656	COMPL,CA-3
11	636 030 6332	ASSY,LENS
12	636 030 0224	HOLDER
13	636 030 0255	SPACER
14	409 223 9102	IC ICX027CK-6,CCD
15	636 031 1657	SPACER
16	411 137 6900	SCR S-TPG BIN 2X16
17	636 031 8625	COMPL,CA-2
18	636 030 1092	SHIELD PLATE,F
19	636 031 8632	COMPL,TC-1
20	411 030 5000	SCR BIN 2X3
21	636 029 9344	F-PCB,TC1&TC2
22	636 030 6721	INSULATOR
23	636 030 0248	BASE
24	636 031 8649	COMPL,TC-2
25	636 030 7353	OPTICAL FILTER
OR	636 032 9263	OPTICAL FILTER
OR	636 033 7411	OPTICAL FILTER
26	411 133 2302	SCR S-TPG PAN PCS 2X6
27	636 029 8118	HOLDER,B
28	636 029 9481	F-PCB,CAMERA
29	636 030 0989	GUIDE,B
30	411 133 2401	SCR S-TPG PAN PCS 2X8
31	636 030 0583	KNOB,D
32	411 099 0701	SCR PAN PCS 1.7X3
33	636 031 5938	PLATE,B
34	636 030 0934	LEVER
35	412 037 4300	SPECIAL SCREW 2X4 SC

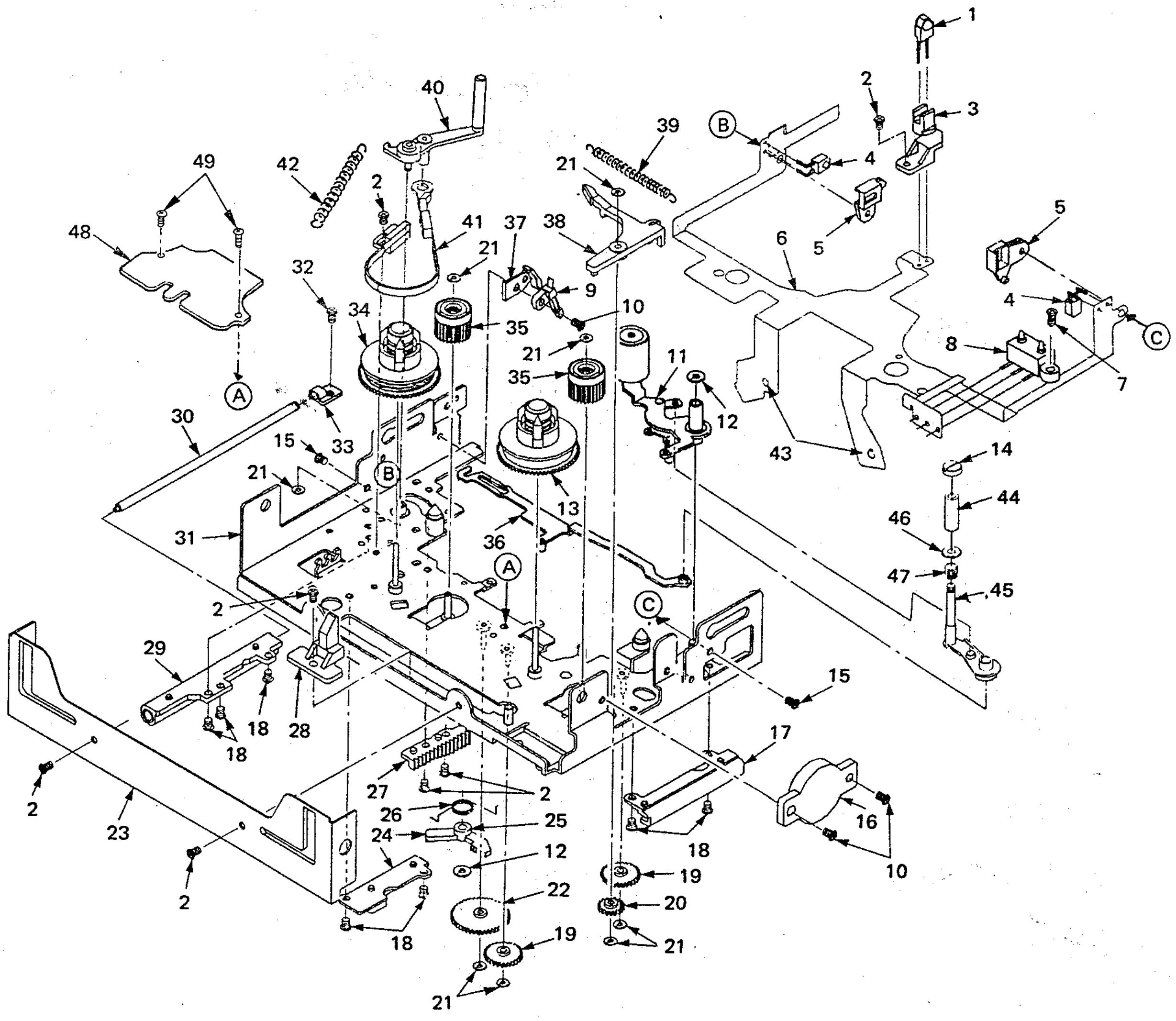


MECHANISM 1

LOCATION	PARTS NO.	DESCRIPTION
1	636 029 6183	CASSETTE MECHANISM
2	636 019 8487	SPRING
3	412 028 3008	SPECIAL WASHER
4	636 033 6704	COMPL,GUIDE,TAKE UP
5	411 015 7104	RING E 1.2
OR	411 015 7104	RING E 1.2
6	636 019 6117	ROLLER
7	636 020 4829	ASSY,GEAR,SUPPLY
8	411 018 3806	SCR PAN PCS 1.7X4
9	636 019 6544	GUIDE
11	411 017 1803	SCR FLT PCS 1.4X3
13	636 025 0109	BRACKET
14	411 018 5305	SCR PAN PCS 1.7X6
15	636 019 6131	ROLLER
16	636 019 6452	SLEEVE
17	636 023 7735	ROLLER
18	411 018 3202	SCR PAN PCS 1.7X3.5
19	411 018 1901	SCR PAN PCS 1.7X2.5
20	636 025 1618	COMPL,BASE
21	636 030 9890	CILINDER
22	636 019 5998	SPRING
23	636 020 1170	RING
24	636 027 3832	PIPE
25	636 019 5882	ASSY,GUIDE
26	636 019 6575	GUIDE
27	636 020 4812	ASSY,GEAR,TAKE UP
28	636 026 3956	PIN
29	636 019 6032	PLATE
30	411 099 6703	SCR PAN PCS 1.4X2
31	636 019 6001	PLATE SPRING
32	636 019 6537	GUIDE
33	636 033 6698	COMPL,GUIDE,SUPPLY
34	636 022 3875	SPRING
35	636 025 8143	ASSY,GUIDE
36	411 018 3806	SCR PAN PCS 1.7X4



LOCATION	PARTS NO.	DESCRIPTION
MECHANISM 2		
1	407 105 3507	LED GL452
OR	407 016 0206	LED GL450S
2	411 099 8905	SCR PAN PCS 1.7X2
3	636 019 3697	BRACKET
4	407 101 5802	PHOTO DIODE PT480FI
5	636 019 3666	BRACKET
6	636 021 0950	F-PCB,REEL
7	411 018 7408	SCR PAN PCS 2X4
8	636 020 0180	SW,SPECIAL
9	636 020 0173	SW,SPECIAL
10	411 099 0701	SCR PAN PCS 1.7X3
11	636 034 1609	ASSY,LEVER
12	412 028 3008	SPECIAL WASHER
13	636 019 5813	ASSY,REEL,TAKE UP
14	636 019 6407	SLEEVE
15	411 030 2504	SCR TPG PAN PCS 1.7X4
16	636 021 2688	DAMPER
17	636 019 3758	BRACKET
18	411 018 1901	SCR PAN PCS 1.7X2.5
19	636 019 4120	GEAR
20	636 019 4168	GEAR
21	412 028 2803	SPECIAL WASHER
22	636 019 4175	GEAR
23	636 030 4925	BRACKET
24	636 019 4311	CAM
25	636 019 4038	LEVER
26	636 019 3901	SPRING
27	636 019 3789	BRACKET
28	636 019 3680	BRACKET
29	636 019 5585	ASSY,BRACKET
30	636 019 4625	PIN
31	636 031 4603	ASSY,CHASSIS,REEL
32	411 019 9401	SCR PAN PCS 1.7X2.5
33	636 019 3734	BRACKET
34	636 019 5806	ASSY,REEL,SUPPLY
35	636 019 7329	ASSY,GEAR
36	636 019 5745	ASSY,LEVER
37	636 030 5250	ASSY,BRACKET B
38	636 020 4805	ASSY,LEVER
39	636 019 3819	SPRING
40	636 028 6023	ASSY,LEVER
41	636 019 5844	ASSY,BELT,BACKTENTION
42	636 019 3826	SPRING
43	407 094 1409	REEL PLATE SENSOR
44	636 019 6483	GUIDE
45	636 019 5776	ASSY,LEVER
46	636 019 6339	RING
47	636 019 5974	SPRING
48	636 024 0612	BLIND
49	411 019 3805	SCR PAN PCS 1.4X2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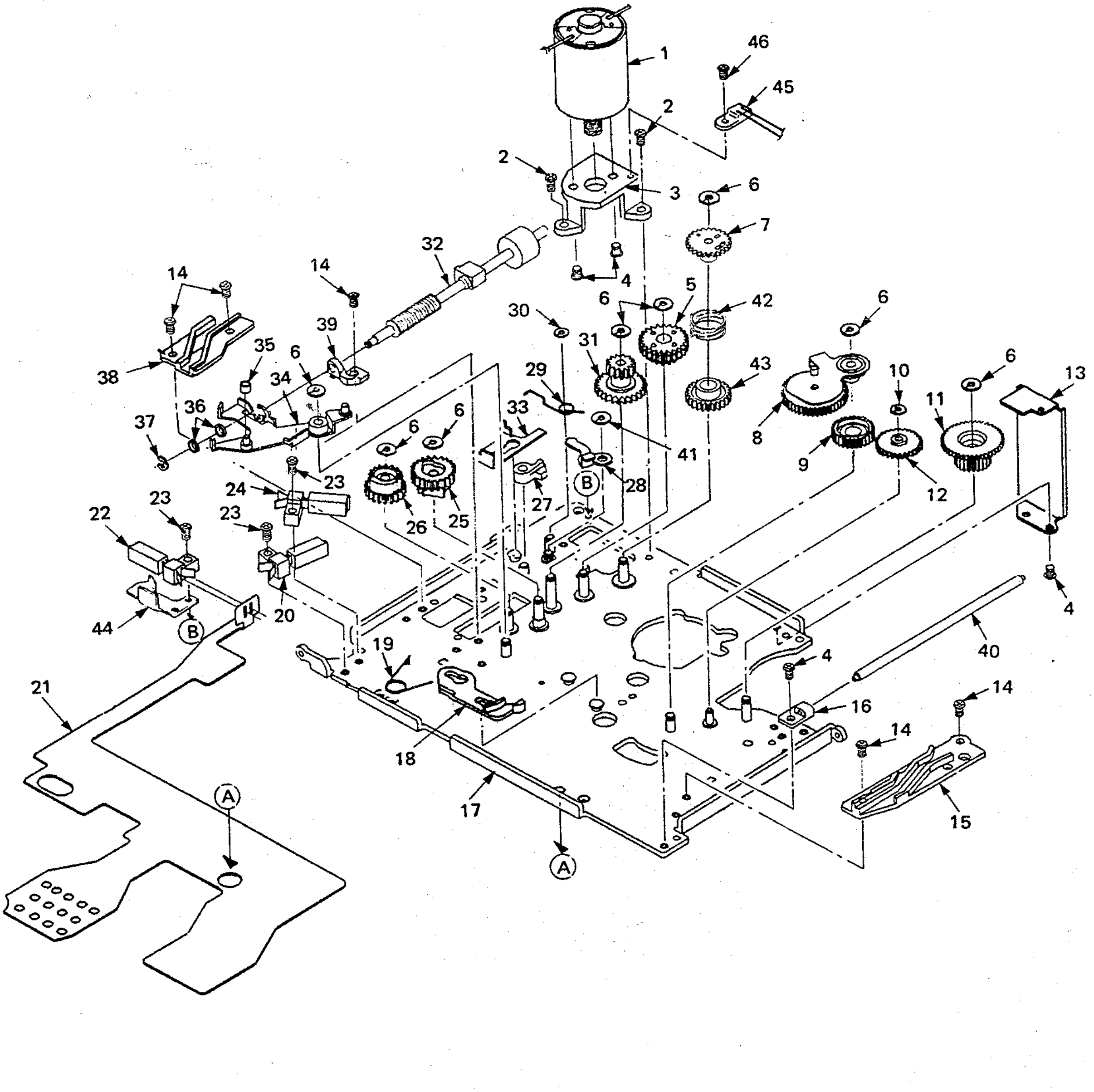
MECHANISM 3

LOCATION	PARTS NO.	DESCRIPTION
1	636 031 4405	ASSY,MOTOR,LOADING
2	411 099 0701	SCR PAN PCS 1.7X3
3	636 019 3765	BRACKET
4	411 099 8905	SCR PAN PCS 1.7X2
5	636 021 1995	ASSY,GEAR
6	412 028 3008	SPECIAL WASHER
7	636 019 4243	GEAR
8	636 031 5563	ASSY,GEAR,IDLER
9	636 019 4137	GEAR
10	412 028 2803	SPECIAL WASHER
11	636 019 4113	GEAR
12	636 019 4120	GEAR
13	636 020 1231	BRACKET
14	411 018 1901	SCR PAN PCS 1.7X2.5
15	636 019 6100	CAM
16	636 019 3734	BRACKET
17	636 025 9836	ASSY,CHASSIS,MAIN
18	636 020 1279	SLIDE
19	636 020 1262	SPRING
20	636 020 0166	SW,SPECIAL
21	636 021 0967	F-PCB,MAIN
22	636 020 0159	SW,SPECIAL
23	411 018 4100	SCR PAN PCS 1.7X4.5
24	636 025 1229	SW,SPECIAL
25	636 028 4241	GEAR
26	636 021 1988	ASSY,GEAR
27	636 019 3956	LEVER
28	636 031 5181	LEVER
29	636 026 3642	SPRING
30	412 030 0804	SPECIAL WASHER
31	636 019 4236	GEAR
32	636 019 5868	ASSY,ROD
33	636 019 4083	LINK
34	636 019 5738	ASSY,LEVER
35	636 019 4922	SLEEVE
36	636 019 4854	RING
37	411 015 7104	RING E 1.2
38	636 019 3727	BRACKET
39	636 019 3772	BRACKET
40	636 019 4632	PIN
41	412 032 9003	SPECIAL WASHER
42	636 019 3833	SPRING
43	636 019 4250	GEAR
44	636 031 5174	BRACKET
45	636 031 2784	SENSOR,DEW
46	411 099 8905	SCR PAN PCS 1.7X2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ELECTRICAL PARTS

NOTE;

*Materials of Capacitors and Resistors are abbreviated as follows;

Resistors	
MT-FILE	Metal Film Resistor
MT-GLAZE	Metal Glaze Resistor
OXIDE-MT	Oxide Metal Film Resistor
Capacitors	
MT-POLYEST	Metallized Polyester Capacitor
MT-COMPO	Metallized Composite Capacitor

TA-SOLID	Tantalum Solid Capacitor
AL-SOLID	Aluminum Solid Capacitor
NP-ELECT	Non-Polarized Electrolytic Capacitor
OS-SOLID	Aluminum Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
DL-ELECT	Double Layered Electrolytic Capacitor

*Tolerance of Capacitor(10pF over) and Resistor are noted with follow symboles.

F ············±1%　G ············±2%　J ············±5%　K ············±10%
M ············±20%　N ············±30%　Z ············+80% ~ −20%　D ············±0.5%

LOCATION	PARTS NO.	DESCRIPTION			
COMPL,VD-1					
COMPL.NO.	636 032 0567				
	636 030 1047	SHIELD PLATE,A			
	636 030 1054	SHIELD PLATE,B			
	636 030 1061	SHIELD PLATE,C			
	636 030 1078	SHIELD PLATE,D			
	636 030 1139	INSULATOR,D			
	636 029 6084	SHIELD			
B3800	636 019 2546	BATTERY CASE ASSY			
C1001	403 014 9203	CERAMIC	180P	J	50V
C1002	403 145 9905	CERAMIC	22P	J	50V
C1003	403 157 8309	CERAMIC	0.1U	Z	16V
C1004	403 196 3200	CERAMIC	0.47U	Z	25V
C1005	403 196 0708	ELECT	10U	M	16V
C1006	403 196 0708	ELECT	10U	M	16V
C1007	403 155 1807	CERAMIC	0.01U	K	25V
C1008	403 152 9004	ELECT	47U	M	6.3V
OR	403 175 4505	ELECT	47U	M	6.3V
C1009	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1010	403 155 1807	CERAMIC	0.01U	K	25V
C1011	403 196 0708	ELECT	10U	M	16V
C1012	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1013	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1014	403 196 0708	ELECT	10U	M	16V
C1015	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1016	403 155 1807	CERAMIC	0.01U	K	25V
C1017	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1018	403 196 3200	CERAMIC	0.47U	Z	25V
C1019	403 196 3200	CERAMIC	0.47U	Z	25V
C1020	403 196 3105	CERAMIC	1U	Z	16V
C1021	403 196 3200	CERAMIC	0.47U	Z	25V
C1023	403 196 0708	ELECT	10U	M	16V
C1024	403 192 0207	TA-SOLID	4.7U	M	6.3V
C1026	403 153 0802	ELECT	220U	M	4V
OR	403 175 4604	ELECT	220U	M	4V
C1027	403 155 1807	CERAMIC	0.01U	K	25V
C1028	403 196 0708	ELECT	10U	M	16V
C1029	403 155 1807	CERAMIC	0.01U	K	25V
C1030	403 157 7906	CERAMIC	0.047U	Z	16V
C1031	403 155 1807	CERAMIC	0.01U	K	25V
C1032	403 155 1807	CERAMIC	0.01U	K	25V
C1033	403 196 0708	ELECT	10U	M	16V
C1035	403 162 3900	ELECT	47U	M	4V
OR	403 152 9608	ELECT	47U	M	4V
C1036	403 196 0708	ELECT	10U	M	16V
C1037	403 155 1807	CERAMIC	0.01U	K	25V
C1038	403 196 0708	ELECT	10U	M	16V
C1039	403 155 1807	CERAMIC	0.01U	K	25V
C1040	403 024 7107	CERAMIC	390P	J	50V
C1041	403 169 2807	CERAMIC	330P	J	50V
C1042	403 196 0708	ELECT	10U	M	16V
C1043	403 155 1807	CERAMIC	0.01U	K	25V
C1044	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1045	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1046	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1050	403 157 3304	CERAMIC	68P	J	50V
C1051	403 139 7504	CERAMIC	39P	J	50V
C1052	403 157 8309	CERAMIC	0.1U	Z	16V
C1053	403 157 8309	CERAMIC	0.1U	Z	16V
C1055	403 196 3105	CERAMIC	1U	Z	16V
C1056	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1057	403 155 1609	CERAMIC	33P	J	50V
C1058	403 157 2901	CERAMIC	47P	J	50V
C1059	403 196 3105	CERAMIC	1U	Z	16V
C1060	403 196 3105	CERAMIC	1U	Z	16V
C1061	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1062	403 155 4204	CERAMIC	15P	J	50V
C1063	403 028 4201	CERAMIC	56P	J	50V
C1064	403 155 1302	CERAMIC	150P	J	50V
C1065	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1066	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1067	403 169 2807	CERAMIC	330P	J	50V
C1069	403 157 2505	CERAMIC	27P	J	50V
C1070	403 139 7504	CERAMIC	39P	J	50V
C1071	403 139 7306	CERAMIC	18P	J	50V
C1072	403 157 3601	CERAMIC	100P	J	50V
C1073	403 028 9909	CERAMIC	560P	J	50V
C1077	403 155 1807	CERAMIC	0.01U	K	25V
C1078	403 139 7306	CERAMIC	18P	J	50V
C1080	403 145 9905	CERAMIC	22P	J	50V
C1099	403 155 1807	CERAMIC	0.01U	K	25V
C1101	403 196 3105	CERAMIC	1U	Z	16V
C1102	403 113 3805	CERAMIC	1000P	K	50V
C1103	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1104	403 113 3805	CERAMIC	1000P	K	50V
C1105	403 155 1807	CERAMIC	0.01U	K	25V
C1108	403 157 8309	CERAMIC	0.1U	Z	16V
C1109	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1110	403 113 3805	CERAMIC	1000P	K	50V
C1111	403 167 0201	TA-SOLID	3.3U	M	6.3V
C1112	403 113 3805	CERAMIC	1000P	K	50V
C1114	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1115	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1116	403 153 9300	CERAMIC	82P	J	50V
C1118	403 167 1505	TA-SOLID	6.8U	M	6.3V
C1119	403 157 3601	CERAMIC	100P	J	50V
C1120	403 155 1807	CERAMIC	0.01U	K	25V

LOCATION	PARTS NO.	DESCRIPTION		
C1121	403 167 0201	TA-SOLID	3.3U M	6.3V
C1122	403 153 9300	CERAMIC	82P J	50V
C1123	403 157 2505	CERAMIC	27P J	50V
C1124	403 167 1505	TA-SOLID	6.8U M	6.3V
C1201	403 167 1505	TA-SOLID	6.8U M	6.3V
C1202	403 155 1807	CERAMIC	0.01U K	25V
C1203	403 167 1505	TA-SOLID	6.8U M	6.3V
C1204	403 155 1807	CERAMIC	0.01U K	25V
C1206	403 162 3900	ELECT	47U M	4V
OR	403 152 9608	ELECT	47U M	4V
C1209	403 167 0607	TA-SOLID	1U M	16V
C1210	403 113 3805	CERAMIC	1000P K	50V
C1211	403 167 0607	TA-SOLID	1U M	16V
C1212	403 157 7609	CERAMIC	0.022U Z	25V
C1213	403 167 0508	TA-SOLID	0.68U M	16V
C1214	403 155 1807	CERAMIC	0.01U K	25V
C1215	403 167 1505	TA-SOLID	6.8U M	6.3V
C1216	403 155 1807	CERAMIC	0.01U K	25V
C1217	403 155 1807	CERAMIC	0.01U K	25V
C1218	403 139 7306	CERAMIC	18P J	50V
C1219	403 113 3805	CERAMIC	1000P K	50V
C1220	403 155 1302	CERAMIC	150P J	50V
C1221	403 155 1807	CERAMIC	0.01U K	25V
C1223	403 155 1807	CERAMIC	0.01U K	25V
C1224	403 155 1807	CERAMIC	0.01U K	25V
C1225	403 155 1807	CERAMIC	0.01U K	25V
C1226	403 155 1609	CERAMIC	33P J	50V
C1227	403 155 1807	CERAMIC	0.01U K	25V
C1228	403 155 1807	CERAMIC	0.01U K	25V
C1229	403 155 1807	CERAMIC	0.01U K	25V
C1230	403 157 8309	CERAMIC	0.1U Z	16V
C1231	403 157 3304	CERAMIC	68P J	50V
C1232	403 155 1807	CERAMIC	0.01U K	25V
C1302	403 157 8309	CERAMIC	0.1U Z	16V
C1303	403 157 3403	CERAMIC	75P J	50V
C1304	403 113 4109	CERAMIC	2200P K	50V
C1305	403 155 1609	CERAMIC	33P J	50V
C1308	403 172 6106	CERAMIC	270P J	50V
C1309	403 157 8309	CERAMIC	0.1U Z	16V
C1310	403 113 4109	CERAMIC	2200P K	50V
C1311	403 157 3304	CERAMIC	68P J	50V
C1312	403 155 1807	CERAMIC	0.01U K	25V
C1314	403 153 9102	CERAMIC	5P C	50V
C1315	403 155 1807	CERAMIC	0.01U K	25V
C1316	403 155 1609	CERAMIC	33P J	50V
C1317	403 153 9102	CERAMIC	5P C	50V
C1319	403 196 3105	CERAMIC	1U Z	16V
C1320	403 155 1807	CERAMIC	0.01U K	25V
C1323	403 157 2901	CERAMIC	47P J	50V
C1324	403 026 7501	CERAMIC	470P J	50V
C1325	403 157 2901	CERAMIC	47P J	50V
C1326	403 155 1302	CERAMIC	150P J	50V
C1327	403 153 9300	CERAMIC	82P J	50V
C1332	403 155 1807	CERAMIC	0.01U K	25V
C1333	403 155 1807	CERAMIC	0.01U K	25V
C1334	403 155 2309	CERAMIC	4700P K	50V
C1335	403 157 8309	CERAMIC	0.1U Z	16V
C1336	403 153 9300	CERAMIC	82P J	50V
C1337	403 157 2901	CERAMIC	47P J	50V
C1338	403 157 8309	CERAMIC	0.1U Z	16V
C1339	403 155 1807	CERAMIC	0.01U K	25V
C1340	403 157 8309	CERAMIC	0.1U Z	16V
C1341	403 157 8309	CERAMIC	0.1U Z	16V
C1342	403 157 8309	CERAMIC	0.1U Z	16V
C1401	403 155 1807	CERAMIC	0.01U K	25V
C1402	403 196 0708	ELECT	10U M	16V
C1403	403 196 3105	CERAMIC	1U Z	16V
C1414	403 026 7501	CERAMIC	470P J	50V
C1450	403 155 1609	CERAMIC	33P J	50V
C1451	403 157 3106	CERAMIC	56P J	50V
C1452	403 196 3105	CERAMIC	1U Z	16V
C1453	403 157 3809	CERAMIC	120P J	50V
C1454	403 155 1807	CERAMIC	0.01U K	25V
C1455	403 155 1807	CERAMIC	0.01U K	25V
C1456	403 157 8309	CERAMIC	0.1U Z	16V
C1457	403 153 9300	CERAMIC	82P J	50V
C1458	403 139 7504	CERAMIC	39P J	50V
C1501	403 157 3601	CERAMIC	100P J	50V
C1502	403 155 1302	CERAMIC	150P J	50V
C1503	403 153 9300	CERAMIC	82P J	50V
C1504	403 157 3601	CERAMIC	100P J	50V
C1505	403 157 8309	CERAMIC	0.1U Z	16V
C1650	403 011 4904	CERAMIC	120P J	50V
C1901	403 157 8309	CERAMIC	0.1U Z	16V
C1902	403 155 1807	CERAMIC	0.01U K	25V
C1903	403 155 1807	CERAMIC	0.01U K	25V
C1904	403 157 8309	CERAMIC	0.1U Z	16V
C1905	403 157 8309	CERAMIC	0.1U Z	16V
C1906	403 157 8309	CERAMIC	0.1U Z	16V
C1907	403 157 8309	CERAMIC	0.1U Z	16V
C1908	403 157 8309	CERAMIC	0.1U Z	16V
C1909	403 157 8309	CERAMIC	0.1U Z	16V
C1910	403 155 1807	CERAMIC	0.01U K	25V
C1911	403 155 1807	CERAMIC	0.01U K	25V
C1912	403 157 8309	CERAMIC	0.1U Z	16V
C1914	403 155 1807	CERAMIC	0.01U K	25V
C1915	403 157 7906	CERAMIC	0.047U Z	16V
C1916	403 155 1807	CERAMIC	0.01U K	25V
C1917	403 157 8309	CERAMIC	0.1U Z	16V
C1918	403 192 0207	TA-SOLID	4.7U M	6.3V
C1919	403 157 8309	CERAMIC	0.1U Z	16V
C1920	403 192 0207	TA-SOLID	4.7U M	6.3V
C1921	403 157 8309	CERAMIC	0.1U Z	16V
C1922	403 192 0207	TA-SOLID	4.7U M	6.3V
C1923	403 157 8309	CERAMIC	0.1U Z	16V
C1924	403 192 0207	TA-SOLID	4.7U M	6.3V
C1925	403 192 0207	TA-SOLID	4.7U M	6.3V
C1926	403 157 8309	CERAMIC	0.1U Z	16V
C1927	403 155 1807	CERAMIC	0.01U K	25V
C1928	403 155 1807	CERAMIC	0.01U K	25V
C1929	403 157 8309	CERAMIC	0.1U Z	16V
C1930	403 157 8309	CERAMIC	0.1U Z	16V
C1931	403 157 8309	CERAMIC	0.1U Z	16V
C1932	403 157 8309	CERAMIC	0.1U Z	16V
C1933	403 157 8309	CERAMIC	0.1U Z	16V
C1934	403 157 8309	CERAMIC	0.1U Z	16V
C1935	403 155 1807	CERAMIC	0.01U K	25V
C1936	403 155 1807	CERAMIC	0.01U K	25V
C1937	403 157 8309	CERAMIC	0.1U Z	16V
C1938	403 155 1807	CERAMIC	0.01U K	25V
C1943	403 157 7906	CERAMIC	0.047U Z	16V
C1944	403 155 1807	CERAMIC	0.01U K	25V
C1945	403 157 8309	CERAMIC	0.1U Z	16V
C1946	403 192 0207	TA-SOLID	4.7U M	6.3V
C1947	403 157 8309	CERAMIC	0.1U Z	16V
C1948	403 192 0207	TA-SOLID	4.7U M	6.3V
C1949	403 192 0207	TA-SOLID	4.7U M	6.3V
C1950	403 157 8309	CERAMIC	0.1U Z	16V
C1951	403 157 8309	CERAMIC	0.1U Z	16V
C1952	403 192 0207	TA-SOLID	4.7U M	6.3V
C1953	403 192 0207	TA-SOLID	4.7U M	6.3V
C1954	403 155 1807	CERAMIC	0.01U K	25V
C1955	403 155 1807	CERAMIC	0.01U K	25V
C1956	403 155 1807	CERAMIC	0.01U K	25V
C1957	403 155 1807	CERAMIC	0.01U K	25V
C1960	403 155 1807	CERAMIC	0.01U K	25V
C1961	403 155 1807	CERAMIC	0.01U K	25V
C1962	403 155 1807	CERAMIC	0.01U K	25V

LOCATION	PARTS NO.	DESCRIPTION
C1963	403 155 1807	CERAMIC 0.01U K 25V
C1964	403 155 1807	CERAMIC 0.01U K 25V
C1965	403 155 1807	CERAMIC 0.01U K 25V
C1966	403 157 8309	CERAMIC 0.1U Z 16V
C1970	403 155 1807	CERAMIC 0.01U K 25V
C3202	403 152 9707	ELECT 22U M 6.3V
OR	403 162 4006	ELECT 22U M 6.3V
C3203	403 068 0409	CERAMIC 0.1U Z 25V
C3204	403 157 2604	CERAMIC 30P J 50V
C3206	403 176 3200	CERAMIC 1U Z 25V
C3207	403 068 2007	CERAMIC 0.022U K 25V
C3208	403 155 2200	CERAMIC 3300P K 50V
C3209	403 028 9800	CERAMIC 560P J 50V
C3210	403 157 3601	CERAMIC 100P J 50V
C3211	403 068 0409	CERAMIC 0.1U Z 25V
C3222	403 157 2901	CERAMIC 47P J 50V
C3223	403 157 2901	CERAMIC 47P J 50V
C3224	403 157 2901	CERAMIC 47P J 50V
C3501	403 196 3105	CERAMIC 1U Z 16V
C3503	403 176 3200	CERAMIC 1U Z 25V
C3504	403 157 4202	CERAMIC 220P J 50V
C3505	403 068 0409	CERAMIC 0.1U Z 25V
C3506	403 157 7906	CERAMIC 0.047U Z 16V
C3507	403 158 8308	TA-SOLID 10U M 6.3V
OR	403 192 0405	TA-SOLID 10U M 6.3V
C3508	403 158 8308	TA-SOLID 10U M 6.3V
OR	403 192 0405	TA-SOLID 10U M 6.3V
C3509	403 158 8308	TA-SOLID 10U M 6.3V
OR	403 192 0405	TA-SOLID 10U M 6.3V
C3510	403 196 0708	ELECT 10U M 16V
C3511	403 068 0409	CERAMIC 0.1U Z 25V
C3512	403 139 7108	CERAMIC 12P J 50V
C3513	403 139 7108	CERAMIC 12P J 50V
C3514	403 068 0409	CERAMIC 0.1U Z 25V
C3517	403 155 1807	CERAMIC 0.01U K 25V
C3518	403 155 1807	CERAMIC 0.01U K 25V
C3520	403 176 3200	CERAMIC 1U Z 25V
C3521	403 176 3200	CERAMIC 1U Z 25V
C3523	403 176 3200	CERAMIC 1U Z 25V
C3526	403 167 0201	TA-SOLID 3.3U M 6.3V
C3530	403 176 3200	CERAMIC 1U Z 25V
C3531	403 157 8309	CERAMIC 0.1U Z 16V
C3532	403 176 3200	CERAMIC 1U Z 25V
C3533	403 157 3601	CERAMIC 100P J 50V
C3701	403 152 9707	ELECT 22U M 6.3V
OR	403 162 4006	ELECT 22U M 6.3V
C3702	403 155 1807	CERAMIC 0.01U K 25V
C3705	403 176 3200	CERAMIC 1U Z 25V
C3706	403 176 3200	CERAMIC 1U Z 25V
C3707	403 113 3805	CERAMIC 1000P K 50V
C3709	403 155 1609	CERAMIC 33P J 50V
C3710	403 155 1609	CERAMIC 33P J 50V
C3711	403 157 6602	CERAMIC 470P K 50V
C3712	403 157 3106	CERAMIC 56P J 50V
C3713	403 113 3805	CERAMIC 1000P K 50V
C3714	403 145 9905	CERAMIC 22P J 50V
C3715	403 155 2101	CERAMIC 1500P K 50V
C3716	403 068 2007	CERAMIC 0.022U K 25V
C3717	403 068 2007	CERAMIC 0.022U K 25V
C3718	403 157 7906	CERAMIC 0.047U Z 16V
C3719	403 113 3805	CERAMIC 1000P K 50V
C3720	403 155 2200	CERAMIC 3300P K 50V
C3721	403 068 2007	CERAMIC 0.022U K 25V
C3723	403 155 1807	CERAMIC 0.01U K 25V
C3724	403 176 3200	CERAMIC 1U Z 25V
C3725	403 113 3805	CERAMIC 1000P K 50V
C3726	403 113 3805	CERAMIC 1000P K 50V
C3728	403 169 2807	CERAMIC 330P J 50V
C3801	403 167 0201	TA-SOLID 3.3U M 6.3V
C3802	403 155 1807	CERAMIC 0.01U K 25V
C3803	403 176 3200	CERAMIC 1U Z 25V
C3804	403 176 3200	CERAMIC 1U Z 25V
C3806	403 157 4202	CERAMIC 220P J 50V
C3807	403 167 0201	TA-SOLID 3.3U M 6.3V
C3808	403 073 1200	CERAMIC 0.033U K 50V
C3813	403 196 0708	ELECT 10U M 16V
C3814	403 068 0409	CERAMIC 0.1U Z 25V
C3815	403 068 2007	CERAMIC 0.022U K 25V
C3816	403 113 3805	CERAMIC 1000P K 50V
C3817	403 068 2007	CERAMIC 0.022U K 25V
C3818	403 113 3805	CERAMIC 1000P K 50V
C3819	403 068 0409	CERAMIC 0.1U Z 25V
C3821	403 100 9704	CERAMIC 0.1U M 25V
C3822	403 157 7906	CERAMIC 0.047U Z 16V
C3823	403 155 1500	CERAMIC 180P J 50V
C3824	403 100 9704	CERAMIC 0.1U M 25V
C3825	403 154 2904	OS-SOLID 10U M 10V
C3826	403 157 1904	CERAMIC 10P D 50V
C3827	403 145 9905	CERAMIC 22P J 50V
C3828	403 154 2904	OS-SOLID 10U M 10V
C3830	403 157 1904	CERAMIC 10P D 50V
C3831	403 145 9905	CERAMIC 22P J 50V
C3832	403 154 2904	OS-SOLID 10U M 10V
C3833	403 068 0409	CERAMIC 0.1U Z 25V
C3834	403 068 0409	CERAMIC 0.1U Z 25V
C3835	403 068 0409	CERAMIC 0.1U Z 25V
C3836	403 176 3200	CERAMIC 1U Z 25V
C3837	403 176 3200	CERAMIC 1U Z 25V
C3838	403 068 0409	CERAMIC 0.1U Z 25V
C3839	403 068 0409	CERAMIC 0.1U Z 25V
C3840	403 068 0409	CERAMIC 0.1U Z 25V
C3841	403 176 3200	CERAMIC 1U Z 25V
C3842	403 176 3200	CERAMIC 1U Z 25V
C3843	403 075 0706	CERAMIC 6800P K 50V
C3844	403 075 0706	CERAMIC 6800P K 50V
C3848	403 155 2200	CERAMIC 3300P K 50V
C3849	403 155 2200	CERAMIC 3300P K 50V
CN359	636 030 1610	JACK,EARPHONE OUT
CT321	636 000 4795	TRIMMER
D1001	407 113 5609	DIODE DSH015-TL
D1002	407 106 1601	DEODE DCG015-TL
D1003	407 113 5609	DIODE DSH015-TL
D1005	407 113 5609	DIODE DSH015-TL
D1202	407 106 1601	DEODE DCG015-TL
D1301	407 113 0505	DIODE 1SS302-TE85L
D1401	407 106 1601	DEODE DCG015-TL
D1402	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1403	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1404	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1405	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1406	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1407	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1408	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1409	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1410	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D1411	407 106 1601	DEODE DCG015-TL

LOCATION	PARTS NO.	DESCRIPTION
D1412	407 113 0505	DIODE 1SS302-TE85L
D3502	407 130 4401	DIODE DAN202U-T106
OR	407 106 1601	DEODE DCG015-TL
D3511	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D3512	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D3513	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D3514	407 057 8902	ZENER DIODE RD8.2MB2
OR	407 129 0605	ZENER DIODE MA3082-M-TW
D3601	407 130 4401	DIODE DAN202U-T106
OR	407 106 1601	DEODE DCG015-TL
D3801	407 010 0707	DIODE SB05-05CP
D3802	407 010 0707	DIODE SB05-05CP
IC101	409 212 8703	IC CXA1207R-T5
IC102	409 212 9007	IC HA118070FP-TR
IC103	409 149 2904	IC NJM2235M-T1
IC111	409 223 6606	IC CXL1506M-T3
IC121	409 212 8802	IC CXA1208R-T3
IC122	409 168 0202	IC NJM2234M-T1
IC191	409 170 9200	IC CXA1202R-T3
IC192	409 170 9200	IC CXA1202R-T3
IC321	409 170 0603	IC UPD61426-101-T1
IC322	409 170 0900	IC LVA519F-T1
IC323	409 159 2406	IC SC14S81FEL
OR	409 137 9007	IC TC4S81F(TE85L)
IC351	410 107 6704	IC CXP80116-554Q
IC352	409 215 6805	IC LB1638M-T1
IC353	409 018 3704	IC LA6358M-T1
OR	409 220 6906	IC LM358D-R
IC354	409 198 2306	IC NJU7201U50(TE1)
IC355	409 202 0700	IC SCI7701YJA-T1
IC371	409 150 0500	IC CXA1204Q
IC381	409 139 5304	IC LB1617M-T1
IC382	409 139 5304	IC LB1617M-T1
IC383	409 004 8607	IC CX20115-T1
IC384	409 018 3704	IC LA6358M-T1
OR	409 220 6906	IC LM358D-R
IC385	409 132 3307	IC MB3775PF-G-BND-TF
L1001	636 019 8579	COIL,INDUCTOR 100UH
L1002	636 019 8579	COIL,INDUCTOR 100UH
L1003	636 019 8746	COIL,INDUCTOR 47UH
L1005	636 003 2507	HF CHOKE,68UH
L1006	636 003 2507	HF CHOKE,68UH
L1007	636 003 2507	HF CHOKE,68UH
L1009	636 003 2460	HF CHOKE,33UH
L1010	636 003 2514	HF CHOKE,82UH
L1011	636 003 2521	HF CHOKE,100UH
L1012	636 003 2514	HF CHOKE,82UH
L1013	636 003 2569	HF CHOKE,220UH
L1014	636 003 2460	HF CHOKE,33UH
L1015	636 003 2507	HF CHOKE,68UH
L1016	636 003 2507	HF CHOKE,68UH
L1101	636 003 5379	CORE
L1102	636 003 5379	CORE
L1103	636 003 5379	CORE
L1104	636 019 8647	COIL,INDUCTOR 22UH
L1105	636 003 5379	CORE
L1201	636 019 8746	COIL,INDUCTOR 47UH
L1203	636 003 2521	HF CHOKE,100UH
L1301	636 019 8579	COIL,INDUCTOR 100UH
L1302	636 019 8579	COIL,INDUCTOR 100UH
L1303	636 028 1813	COIL,INDUCTOR 4.7UH
L1304	636 003 3207	HF CHOKE,470UH
L1305	636 003 3184	HF CHOKE,330UH
L1307	636 003 2552	HF CHOKE,180UH

LOCATION	PARTS NO.	DESCRIPTION
L1308	636 003 2453	HF CHOKE,27UH
L1309	636 003 2408	HF CHOKE,10UH
L1311	636 003 3184	HF CHOKE,330UH
L1312	636 003 3184	HF CHOKE,330UH
L1313	636 003 2538	HF CHOKE,120UH
L1315	636 003 2521	HF CHOKE,100UH
L1316	636 003 2545	HF CHOKE,150UH
L1450	636 003 2477	HF CHOKE,39UH
L1501	636 003 2408	HF CHOKE,10UH
L1502	636 019 8579	COIL,INDUCTOR 100UH
L1901	636 019 8555	COIL,INDUCTOR 10UH
L1902	636 019 8555	COIL,INDUCTOR 10UH
L1903	636 019 8555	COIL,INDUCTOR 10UH
L1904	636 019 8555	COIL,INDUCTOR 10UH
L1905	636 019 8555	COIL,INDUCTOR 10UH
L1906	636 019 8555	COIL,INDUCTOR 10UH
L1907	636 019 8555	COIL,INDUCTOR 10UH
L1908	636 019 8555	COIL,INDUCTOR 10UH
L3202	636 003 1241	HF CHOKE,33UH
L3501	636 030 3157	COIL,INDUCTOR 100UH
L3502	636 019 8579	COIL,INDUCTOR 100UH
L3503	636 019 8579	COIL,INDUCTOR 100UH
L3504	636 003 5379	CORE
L3701	636 002 8876	RF CHOKE,330UH
L3803	636 027 5829	COIL,INDUCTOR 10UH
L3804	636 030 7339	COIL,CHOKE 47UH
L3806	636 030 7339	COIL,CHOKE 47UH
Q1001	405 078 6709	TR 2SC4396-TL
Q1002	405 060 7509	TR FMG2-T99
Q1003	405 078 6709	TR 2SC4396-TL
Q1005	405 077 3402	TR 2SC4211-6-TL
Q1006	405 077 3402	TR 2SC4211-6-TL
Q1008	405 077 3402	TR 2SC4211-6-TL
Q1009	405 077 3402	TR 2SC4211-6-TL
Q1010	405 077 3402	TR 2SC4211-6-TL
Q1011	405 077 2207	TR 2SA1622-6-TL
Q1012	405 077 2207	TR 2SA1622-6-TL
Q1014	405 077 2207	TR 2SA1622-6-TL
Q1015	405 077 2207	TR 2SA1622-6-TL
Q1016	405 077 2207	TR 2SA1622-6-TL
Q1017	405 002 4108	TR 2SA1122-D-TL
Q1018	405 077 3402	TR 2SC4211-6-TL
Q1019	405 079 2809	TR IMX1-T109
Q1020	405 077 3402	TR 2SC4211-6-TL
Q1021	405 077 2207	TR 2SA1622-6-TL
Q1024	405 077 3402	TR 2SC4211-6-TL
Q1025	405 077 2207	TR 2SA1622-6-TL
Q1026	405 078 6709	TR 2SC4396-TL
Q1101	405 077 2207	TR 2SA1622-6-TL
Q1102	405 077 3402	TR 2SC4211-6-TL
Q1103	405 077 3402	TR 2SC4211-6-TL
Q1104	405 077 2207	TR 2SA1622-6-TL
Q1105	405 077 3402	TR 2SC4211-6-TL
Q1201	405 077 3402	TR 2SC4211-6-TL
Q1203	405 077 3402	TR 2SC4211-6-TL
Q1204	405 077 3402	TR 2SC4211-6-TL
Q1205	405 077 3402	TR 2SC4211-6-TL
Q1206	405 077 2207	TR 2SA1622-6-TL
Q1207	405 078 6709	TR 2SC4396-TL
Q1208	405 077 2207	TR 2SA1622-6-TL
Q1209	405 077 2207	TR 2SA1622-6-TL
Q1210	405 078 6709	TR 2SC4396-TL
Q1211	405 078 6709	TR 2SC4396-TL
Q1212	405 078 6709	TR 2SC4396-TL
Q1215	405 077 3402	TR 2SC4211-6-TL
Q1216	405 078 5801	TR 2SA1676-TL
Q1301	405 077 2207	TR 2SA1622-6-TL
Q1302	405 077 3402	TR 2SC4211-6-TL

LOCATION	PARTS NO.	DESCRIPTION
Q1303	405 077 3402	TR 2SC4211-6-TL
Q1304	405 077 2207	TR 2SA1622-6-TL
Q1305	405 077 3402	TR 2SC4211-6-TL
Q1306	405 077 3402	TR 2SC4211-6-TL
Q1310	405 077 2207	TR 2SA1622-6-TL
Q1311	405 078 6709	TR 2SC4396-TL
Q1314	405 077 3402	TR 2SC4211-6-TL
Q1316	405 077 2207	TR 2SA1622-6-TL
Q1317	405 060 7202	TR FMA2-T99
Q1319	405 077 3402	TR 2SC4211-6-TL
Q1320	405 078 6709	TR 2SC4396-TL
Q1321	405 078 5801	TR 2SA1676-TL
Q1322	405 078 6709	TR 2SC4396-TL
Q1401	405 008 7707	TR 2SB815-B7
Q1402	405 078 6709	TR 2SC4396-TL
Q1403	405 008 7707	TR 2SB815-B7
Q1404	405 078 6709	TR 2SC4396-TL
Q1405	405 008 7707	TR 2SB815-B7
Q1406	405 078 6709	TR 2SC4396-TL
Q1407	405 077 3402	TR 2SC4211-6-TL
Q1408	405 008 7707	TR 2SB815-B7
Q1450	405 077 2207	TR 2SA1622-6-TL
Q1451	405 078 6709	TR 2SC4396-TL
Q1452	405 078 6709	TR 2SC4396-TL
Q1453	405 077 3402	TR 2SC4211-6-TL
Q1454	405 077 3402	TR 2SC4211-6-TL
Q1455	405 078 6709	TR 2SC4396-TL
Q1456	405 078 6709	TR 2SC4396-TL
Q1499	405 078 6709	TR 2SC4396-TL
Q1501	405 077 2207	TR 2SA1622-6-TL
Q1502	405 077 2207	TR 2SA1622-6-TL
Q1650	405 078 6709	TR 2SC4396-TL
Q1901	405 061 4101	TR 2SA1434
Q1902	405 061 4101	TR 2SA1434
Q1903	405 061 4101	TR 2SA1434
Q1904	405 061 4101	TR 2SA1434
Q1905	405 078 6709	TR 2SC4396-TL
Q1906	405 078 6709	TR 2SC4396-TL
Q1907	405 078 6709	TR 2SC4396-TL
Q1908	405 078 6709	TR 2SC4396-TL
Q1912	405 060 7509	TR FMG2-T99
Q1914	405 078 6709	TR 2SC4396-TL
Q3201	405 077 3402	TR 2SC4211-6-TL
Q3202	405 096 2400	TR DTC144EU-T106
OR	405 078 6709	TR 2SC4396-TL
Q3203	405 077 3402	TR 2SC4211-6-TL
Q3208	405 077 2207	TR 2SA1622-6-TL
Q3209	405 077 2207	TR 2SA1622-6-TL
Q3501	405 047 8109	TR 2SB1202-S-TL
Q3502	405 077 3402	TR 2SC4211-6-TL
Q3505	405 058 5401	TR FMC2-T149
Q3509	405 087 9708	TR FC104-TL
OR	405 035 1105	TR FMW1-T99
Q3510	405 087 9708	TR FC104-TL
OR	405 035 1105	TR FMW1-T99
Q3511	405 089 6903	TR FC115-TL
OR	405 083 0105	TR FMA9-T99
Q3519	405 008 7509	TR 2SB815-B6
Q3520	405 045 5407	TR 2SK303-V4
Q3521	405 096 2400	TR DTC144EU-T106
OR	405 078 6709	TR 2SC4396-TL
Q3701	405 077 3402	TR 2SC4211-6-TL
Q3702	405 077 2207	TR 2SA1622-6-TL
Q3703	405 077 2207	TR 2SA1622-6-TL
Q3801	405 058 5401	TR FMC2-T149
Q3803	405 077 3402	TR 2SC4211-6-TL
Q3804	405 006 8904	TR 2SB1121-T-TD
Q3807	405 077 3402	TR 2SC4211-6-TL
Q3808	405 006 8904	TR 2SB1121-T-TD

LOCATION	PARTS NO.	DESCRIPTION
R1001	401 105 0504	MT-GLAZE 1K JA 1/16W
R1002	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1003	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1004	401 105 2102	MT-GLAZE 18K JA 1/16W
R1005	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1010	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1011	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1012	401 105 4403	MT-GLAZE 39 JA 1/16W
R1013	401 105 1600	MT-GLAZE 15K JA 1/16W
R1014	401 105 5400	MT-GLAZE 47K JA 1/16W
R1015	401 105 0504	MT-GLAZE 1K JA 1/16W
R1016	401 105 6407	MT-GLAZE 68 JA 1/16W
R1017	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1018	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1019	401 105 0504	MT-GLAZE 1K JA 1/16W
R1020	401 105 0702	MT-GLAZE 100K JA 1/16W
R1021	401 105 5509	MT-GLAZE 470K JA 1/16W
R1024	401 105 0603	MT-GLAZE 10K JA 1/16W
R1025	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1026	401 105 0504	MT-GLAZE 1K JA 1/16W
R1027	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1028	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1029	401 105 6506	MT-GLAZE 680 JA 1/16W
R1030	401 037 7305	MT-GLAZE 1.3K JA 1/10W
R1031	401 105 5202	MT-GLAZE 470 JA 1/16W
R1032	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1034	401 105 0504	MT-GLAZE 1K JA 1/16W
R1035	401 105 3208	MT-GLAZE 270 JA 1/16W
R1037	401 105 6506	MT-GLAZE 680 JA 1/16W
R1038	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1039	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1040	401 105 4502	MT-GLAZE 390 JA 1/16W
R1041	401 105 0504	MT-GLAZE 1K JA 1/16W
R1042	401 105 0504	MT-GLAZE 1K JA 1/16W
R1044	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1046	401 105 0504	MT-GLAZE 1K JA 1/16W
R1047	401 105 0603	MT-GLAZE 10K JA 1/16W
R1048	401 105 2102	MT-GLAZE 18K JA 1/16W
R1049	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1050	401 105 6506	MT-GLAZE 680 JA 1/16W
R1051	401 105 6506	MT-GLAZE 680 JA 1/16W
R1052	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1053	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1054	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1055	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1056	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1057	401 105 6506	MT-GLAZE 680 JA 1/16W
R1058	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1059	401 105 1105	MT-GLAZE 12K JA 1/16W
R1060	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1061	401 105 2904	MT-GLAZE 22K JA 1/16W
R1062	401 105 4700	MT-GLAZE 39K JA 1/16W
R1063	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1064	401 105 5905	MT-GLAZE 560 JA 1/16W
R1065	401 105 6506	MT-GLAZE 680 JA 1/16W
R1066	401 105 6506	MT-GLAZE 680 JA 1/16W
R1067	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1068	401 105 5905	MT-GLAZE 560 JA 1/16W
R1069	401 105 4502	MT-GLAZE 390 JA 1/16W
R1070	401 105 5202	MT-GLAZE 470 JA 1/16W
R1071	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1072	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1073	401 113 5904	MT-GLAZE 1.3K JA 1/16W
R1074	401 105 0603	MT-GLAZE 10K JA 1/16W
R1075	401 105 0603	MT-GLAZE 10K JA 1/16W
R1076	401 105 4205	MT-GLAZE 33K JA 1/16W
R1077	401 105 5400	MT-GLAZE 47K JA 1/16W
R1078	401 105 1105	MT-GLAZE 12K JA 1/16W
R1079	401 105 1105	MT-GLAZE 12K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R1080	401 105 0603	MT-GLAZE 10K JA 1/16W
R1082	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1083	401 105 0603	MT-GLAZE 10K JA 1/16W
R1085	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1086	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1087	401 105 6506	MT-GLAZE 680 JA 1/16W
R1088	401 105 6506	MT-GLAZE 680 JA 1/16W
R1089	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1090	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1091	401 105 7305	MT-GLAZE 820 JA 1/16W
R1092	401 105 2706	MT-GLAZE 220 JA 1/16W
R1093	401 105 2706	MT-GLAZE 220 JA 1/16W
R1098	401 105 0702	MT-GLAZE 100K JA 1/16W
R1101	401 105 6100	MT-GLAZE 560K JA 1/16W
R1106	401 105 7503	MT-GLAZE 82K JA 1/16W
R1107	401 105 0900	MT-GLAZE 120 JA 1/16W
R1108	401 105 4700	MT-GLAZE 39K JA 1/16W
R1109	401 105 2904	MT-GLAZE 22K JA 1/16W
R1110	401 105 5202	MT-GLAZE 470 JA 1/16W
R1111	401 105 0405	MT-GLAZE 100 JA 1/16W
R1112	401 105 0504	MT-GLAZE 1K JA 1/16W
R1113	401 105 0504	MT-GLAZE 1K JA 1/16W
R1114	401 105 0504	MT-GLAZE 1K JA 1/16W
R1115	401 105 0504	MT-GLAZE 1K JA 1/16W
R1116	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1117	401 105 4700	MT-GLAZE 39K JA 1/16W
R1118	401 105 2904	MT-GLAZE 22K JA 1/16W
R1119	401 105 5202	MT-GLAZE 470 JA 1/16W
R1120	401 105 0405	MT-GLAZE 100 JA 1/16W
R1121	401 105 0504	MT-GLAZE 1K JA 1/16W
R1122	401 105 0504	MT-GLAZE 1K JA 1/16W
R1123	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1201	401 105 0504	MT-GLAZE 1K JA 1/16W
R1203	401 164 3102	MT-FILM 100K DU 1/10W
R1207	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1208	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1209	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1210	401 105 0603	MT-GLAZE 10K JA 1/16W
R1212	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1214	401 105 0504	MT-GLAZE 1K JA 1/16W
R1216	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1217	401 105 5905	MT-GLAZE 560 JA 1/16W
R1218	401 105 0603	MT-GLAZE 10K JA 1/16W
R1219	401 105 0603	MT-GLAZE 10K JA 1/16W
R1221	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1228	401 105 0504	MT-GLAZE 1K JA 1/16W
R1229	401 105 7305	MT-GLAZE 820 JA 1/16W
R1230	401 105 7602	MT-GLAZE 820K JA 1/16W
R1231	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1232	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1233	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1234	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1235	401 105 0603	MT-GLAZE 10K JA 1/16W
R1236	401 105 0603	MT-GLAZE 10K JA 1/16W
R1237	401 105 0504	MT-GLAZE 1K JA 1/16W
R1241	401 105 0702	MT-GLAZE 100K JA 1/16W
R1246	401 105 0504	MT-GLAZE 1K JA 1/16W
R1247	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1248	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1249	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1253	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1258	401 105 0603	MT-GLAZE 10K JA 1/16W
R1259	401 105 1600	MT-GLAZE 15K JA 1/16W
R1260	401 105 0504	MT-GLAZE 1K JA 1/16W
R1261	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1262	401 105 0504	MT-GLAZE 1K JA 1/16W
R1263	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1264	401 105 0603	MT-GLAZE 10K JA 1/16W
R1265	401 105 0603	MT-GLAZE 10K JA 1/16W
R1266	401 105 2102	MT-GLAZE 18K JA 1/16W
R1267	401 105 6506	MT-GLAZE 680 JA 1/16W
R1268	401 105 0603	MT-GLAZE 10K JA 1/16W
R1270	401 105 0603	MT-GLAZE 10K JA 1/16W
R1271	401 105 2904	MT-GLAZE 22K JA 1/16W
R1272	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1301	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1305	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1307	401 105 5905	MT-GLAZE 560 JA 1/16W
R1308	401 105 4007	MT-GLAZE 330 JA 1/16W
R1311	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1312	401 105 6506	MT-GLAZE 680 JA 1/16W
R1313	401 105 2706	MT-GLAZE 220 JA 1/16W
R1314	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1315	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1316	401 105 0603	MT-GLAZE 10K JA 1/16W
R1317	401 105 1105	MT-GLAZE 12K JA 1/16W
R1318	401 105 5202	MT-GLAZE 470 JA 1/16W
R1319	401 105 1907	MT-GLAZE 180 JA 1/16W
R1320	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1321	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1322	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1323	401 105 0504	MT-GLAZE 1K JA 1/16W
R1324	401 105 2102	MT-GLAZE 18K JA 1/16W
R1325	401 105 2102	MT-GLAZE 18K JA 1/16W
R1326	401 105 5905	MT-GLAZE 560 JA 1/16W
R1327	401 105 1402	MT-GLAZE 150 JA 1/16W
R1332	401 105 2706	MT-GLAZE 220 JA 1/16W
R1333	401 105 6506	MT-GLAZE 680 JA 1/16W
R1334	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1335	401 105 5905	MT-GLAZE 560 JA 1/16W
R1336	401 105 5905	MT-GLAZE 560 JA 1/16W
R1337	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1338	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1347	401 105 7305	MT-GLAZE 820 JA 1/16W
R1349	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1350	401 105 6506	MT-GLAZE 680 JA 1/16W
R1351	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1352	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1353	401 105 4205	MT-GLAZE 33K JA 1/16W
R1354	401 105 2904	MT-GLAZE 22K JA 1/16W
R1359	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1360	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1361	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1363	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1364	401 105 0603	MT-GLAZE 10K JA 1/16W
R1366	401 105 2706	MT-GLAZE 220 JA 1/16W
R1401	401 105 5400	MT-GLAZE 47K JA 1/16W
R1402	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1403	401 105 5400	MT-GLAZE 47K JA 1/16W
R1404	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1405	401 105 5400	MT-GLAZE 47K JA 1/16W
R1406	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1407	401 105 2102	MT-GLAZE 18K JA 1/16W
R1408	401 105 0504	MT-GLAZE 1K JA 1/16W
R1409	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1410	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R1411	401 105 4403	MT-GLAZE 39 JA 1/16W
R1412	401 105 4403	MT-GLAZE 39 JA 1/16W
R1413	401 105 0504	MT-GLAZE 1K JA 1/16W
R1454	401 105 0504	MT-GLAZE 1K JA 1/16W
R1455	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1456	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1457	401 105 0504	MT-GLAZE 1K JA 1/16W
R1458	401 105 1402	MT-GLAZE 150 JA 1/16W
R1459	401 105 3109	MT-GLAZE 27 JA 1/16W
R1460	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1462	401 105 7602	MT-GLAZE 820K JA 1/16W
R1463	401 105 7602	MT-GLAZE 820K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
R1464	401 105 4809	MT-GLAZE 390K JA 1/16W	R3211	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1465	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R3212	401 105 8005	MT-GLAZE 1M JA 1/16W
R1466	401 105 4106	MT-GLAZE 3.3K JA 1/16W	R3214	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1467	401 105 6506	MT-GLAZE 680 JA 1/16W	R3215	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1468	401 105 2706	MT-GLAZE 220 JA 1/16W	R3216	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1469	401 105 5103	MT-GLAZE 47 JA 1/16W	R3218	401 105 0702	MT-GLAZE 100K JA 1/16W
R1470	401 105 6506	MT-GLAZE 680 JA 1/16W	R3219	401 105 0702	MT-GLAZE 100K JA 1/16W
R1471	401 105 6506	MT-GLAZE 680 JA 1/16W	R3221	401 105 0504	MT-GLAZE 1K JA 1/16W
R1472	401 105 4601	MT-GLAZE 3.9K JA 1/16W	R3222	401 105 0603	MT-GLAZE 10K JA 1/16W
R1501	401 105 2607	MT-GLAZE 22 JA 1/16W	R3223	401 105 0603	MT-GLAZE 10K JA 1/16W
R1502	401 105 3208	MT-GLAZE 270 JA 1/16W	R3224	401 105 0603	MT-GLAZE 10K JA 1/16W
R1503	401 105 2706	MT-GLAZE 220 JA 1/16W	R3225	401 037 9002	MT-GLAZE 18 JA 1/10W
R1504	401 105 2904	MT-GLAZE 22K JA 1/16W	R3226	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1505	401 105 4205	MT-GLAZE 33K JA 1/16W	R3501	401 105 0504	MT-GLAZE 1K JA 1/16W
R1650	401 105 0603	MT-GLAZE 10K JA 1/16W	R3502	401 105 0504	MT-GLAZE 1K JA 1/16W
R1901	401 105 4205	MT-GLAZE 33K JA 1/16W	R3503	401 038 9001	MT-GLAZE 680 JA 1/10W
R1902	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R3504	401 038 9001	MT-GLAZE 680 JA 1/10W
R1903	401 105 2904	MT-GLAZE 22K JA 1/16W	R3510	401 105 8104	MT-GLAZE 56K JA 1/16W
R1904	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3511	401 105 8104	MT-GLAZE 56K JA 1/16W
R1905	401 105 5400	MT-GLAZE 47K JA 1/16W	R3516	401 105 1709	MT-GLAZE 150K JA 1/16W
R1906	401 105 4700	MT-GLAZE 39K JA 1/16W	R3517	401 105 0603	MT-GLAZE 10K JA 1/16W
R1907	401 105 3406	MT-GLAZE 27K JA 1/16W	R3518	401 105 5400	MT-GLAZE 47K JA 1/16W
R1908	401 105 5400	MT-GLAZE 47K JA 1/16W	R3519	401 105 8104	MT-GLAZE 56K JA 1/16W
R1909	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3520	401 105 0702	MT-GLAZE 100K JA 1/16W
R1910	401 105 2904	MT-GLAZE 22K JA 1/16W	R3521	401 105 1709	MT-GLAZE 150K JA 1/16W
R1911	401 105 4205	MT-GLAZE 33K JA 1/16W	R3522	401 105 0603	MT-GLAZE 10K JA 1/16W
R1912	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R3523	401 105 5400	MT-GLAZE 47K JA 1/16W
R1913	401 105 6100	MT-GLAZE 560K JA 1/16W	R3524	401 105 8104	MT-GLAZE 56K JA 1/16W
R1914	401 105 4205	MT-GLAZE 33K JA 1/16W	R3525	401 105 0702	MT-GLAZE 100K JA 1/16W
R1915	401 105 6001	MT-GLAZE 5.6K JA 1/16W	R3530	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1916	401 105 2904	MT-GLAZE 22K JA 1/16W	R3531	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1917	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3534	401 105 0702	MT-GLAZE 100K JA 1/16W
R1918	401 105 5400	MT-GLAZE 47K JA 1/16W	R3535	401 105 0603	MT-GLAZE 10K JA 1/16W
R1919	401 105 4700	MT-GLAZE 39K JA 1/16W	R3536	401 105 5905	MT-GLAZE 560 JA 1/16W
R1920	401 105 2904	MT-GLAZE 22K JA 1/16W	R3537	401 038 0602	MT-GLAZE 220 JA 1/10W
R1921	401 105 5400	MT-GLAZE 47K JA 1/16W	R3546	401 105 3505	MT-GLAZE 270K JA 1/16W
R1922	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3547	401 105 5400	MT-GLAZE 47K JA 1/16W
R1923	401 105 2904	MT-GLAZE 22K JA 1/16W	R3548	401 105 0603	MT-GLAZE 10K JA 1/16W
R1924	401 105 4205	MT-GLAZE 33K JA 1/16W	R3552	401 105 5400	MT-GLAZE 47K JA 1/16W
R1925	401 105 6001	MT-GLAZE 5.6K JA 1/16W	R3557	401 105 0702	MT-GLAZE 100K JA 1/16W
R1928	401 105 6100	MT-GLAZE 560K JA 1/16W	R3562	401 105 3000	MT-GLAZE 220K JA 1/16W
R1929	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3563	401 105 3000	MT-GLAZE 220K JA 1/16W
R1930	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3569	401 105 0603	MT-GLAZE 10K JA 1/16W
R1931	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3570	401 114 0502	MT-GLAZE 2.2M JA 1/16W
R1932	401 105 1501	MT-GLAZE 1.5K JA 1/16W	R3584	401 105 5400	MT-GLAZE 47K JA 1/16W
R1936	401 105 6001	MT-GLAZE 5.6K JA 1/16W	R3590	401 105 0603	MT-GLAZE 10K JA 1/16W
R1937	401 105 0603	MT-GLAZE 10K JA 1/16W	R3591	401 105 0603	MT-GLAZE 10K JA 1/16W
R1953	401 105 0603	MT-GLAZE 10K JA 1/16W	R3594	401 105 0603	MT-GLAZE 10K JA 1/16W
R1954	401 113 6406	MT-GLAZE 5.1K JA 1/16W	R3595	401 105 1709	MT-GLAZE 150K JA 1/16W
R1957	401 105 6605	MT-GLAZE 6.8K JA 1/16W	R3598	401 105 1402	MT-GLAZE 150 JA 1/16W
R1958	401 105 2904	MT-GLAZE 22K JA 1/16W	R3599	401 105 0702	MT-GLAZE 100K JA 1/16W
R1960	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R3600	401 105 0603	MT-GLAZE 10K JA 1/16W
R1961	401 105 5301	MT-GLAZE 4.7K JA 1/16W	R3611	401 105 1105	MT-GLAZE 12K JA 1/16W
R1962	401 105 0603	MT-GLAZE 10K JA 1/16W	R3612	401 105 1105	MT-GLAZE 12K JA 1/16W
R1963	401 105 0603	MT-GLAZE 10K JA 1/16W	R3613	401 105 1105	MT-GLAZE 12K JA 1/16W
R1964	401 105 0603	MT-GLAZE 10K JA 1/16W	R3614	401 105 1105	MT-GLAZE 12K JA 1/16W
R1965	401 105 0603	MT-GLAZE 10K JA 1/16W	R3615	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1969	401 105 3406	MT-GLAZE 27K JA 1/16W	R3616	401 105 0504	MT-GLAZE 1K JA 1/16W
R1970	401 105 3406	MT-GLAZE 27K JA 1/16W	R3619	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1971	401 105 3406	MT-GLAZE 27K JA 1/16W	R3620	401 105 0504	MT-GLAZE 1K JA 1/16W
R1972	401 105 3406	MT-GLAZE 27K JA 1/16W	R3621	401 105 0504	MT-GLAZE 1K JA 1/16W
R3201	401 105 0405	MT-GLAZE 100 JA 1/16W	R3622	401 105 5202	MT-GLAZE 470 JA 1/16W
R3202	401 105 0603	MT-GLAZE 10K JA 1/16W	R3623	401 105 6407	MT-GLAZE 68 JA 1/16W
R3203	401 105 3406	MT-GLAZE 27K JA 1/16W	R3624	401 105 0702	MT-GLAZE 100K JA 1/16W
R3204	401 105 7404	MT-GLAZE 8.2K JA 1/16W	R3625	401 105 0603	MT-GLAZE 10K JA 1/16W
R3205	401 105 3307	MT-GLAZE 2.7K JA 1/16W	R3626	401 105 0603	MT-GLAZE 10K JA 1/16W
R3206	401 105 0603	MT-GLAZE 10K JA 1/16W	R3701	401 105 0603	MT-GLAZE 10K JA 1/16W
R3207	401 105 0603	MT-GLAZE 10K JA 1/16W	R3702	401 105 0603	MT-GLAZE 10K JA 1/16W
R3210	401 105 0603	MT-GLAZE 10K JA 1/16W	R3703	401 105 5400	MT-GLAZE 47K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R3705	401 105 0603	MT-GLAZE 10K JA 1/16W
R3707	401 105 7305	MT-GLAZE 820 JA 1/16W
R3708	401 105 8005	MT-GLAZE 1M JA 1/16W
R3714	401 105 0603	MT-GLAZE 10K JA 1/16W
R3716	401 105 0405	MT-GLAZE 100 JA 1/16W
R3717	401 105 2102	MT-GLAZE 18K JA 1/16W
R3718	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R3719	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R3720	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R3721	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R3722	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3723	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R3724	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R3725	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3726	401 105 0603	MT-GLAZE 10K JA 1/16W
R3729	401 105 5202	MT-GLAZE 470 JA 1/16W
R3730	401 105 5202	MT-GLAZE 470 JA 1/16W
R3732	401 105 1907	MT-GLAZE 180 JA 1/16W
R3735	401 105 5905	MT-GLAZE 560 JA 1/16W
R3736	401 105 0603	MT-GLAZE 10K JA 1/16W
R3737	401 105 7909	MT-GLAZE 0 ZA 1/16W
R3738	401 037 5004	MT-GLAZE 0 ZA 1/10W
R3802	401 105 0702	MT-GLAZE 100K JA 1/16W
R3804	401 105 0702	MT-GLAZE 100K JA 1/16W
R3806	401 105 0603	MT-GLAZE 10K JA 1/16W
R3811	401 105 2904	MT-GLAZE 22K JA 1/16W
R3812	401 105 2904	MT-GLAZE 22K JA 1/16W
R3813	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3814	401 105 2904	MT-GLAZE 22K JA 1/16W
R3815	401 105 2904	MT-GLAZE 22K JA 1/16W
R3816	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3817	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3818	401 038 0602	MT-GLAZE 220 JA 1/10W
R3819	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R3820	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3824	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3825	401 105 5400	MT-GLAZE 47K JA 1/16W
R3826	401 038 9001	MT-GLAZE 680 JA 1/10W
R3827	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3828	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3829	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3830	401 105 5400	MT-GLAZE 47K JA 1/16W
R3831	401 038 9001	MT-GLAZE 680 JA 1/10W
R3832	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3833	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3836	401 105 0603	MT-GLAZE 10K JA 1/16W
R3837	401 105 4205	MT-GLAZE 33K JA 1/16W
R3838	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3839	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3840	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3841	401 105 0603	MT-GLAZE 10K JA 1/16W
R3844	401 105 4205	MT-GLAZE 33K JA 1/16W
R3845	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3846	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3847	401 038 2507	MT-GLAZE 3.3 JA 1/10W
R3848	401 105 0603	MT-GLAZE 10K JA 1/16W
R3849	401 105 0702	MT-GLAZE 100K JA 1/16W
R3850	401 105 7909	MT-GLAZE 0 ZA 1/16W
R3853	401 105 2805	MT-GLAZE 2.2K JA 1/16W
RB321	636 030 3331	R-NETWORK,10K OHM
RB351	636 030 3324	R-NETWORK,100 OHM
RB352	636 030 3324	R-NETWORK,100 OHM
RB353	636 030 3324	R-NETWORK,100 OHM
RB354	636 030 3324	R-NETWORK,100 OHM
RB355	636 030 3324	R-NETWORK,100 OHM
RB356	636 030 3324	R-NETWORK,100 OHM
RB357	636 030 3324	R-NETWORK,100 OHM
RB358	636 030 3324	R-NETWORK,100 OHM

LOCATION	PARTS NO.	DESCRIPTION
RB361	636 030 3331	R-NETWORK,10K OHM
RB371	636 030 3331	R-NETWORK,10K OHM
RB381	636 030 3331	R-NETWORK,10K OHM
S3501	636 030 3010	SW,SLIDE
T1101	636 032 0819	FILTER
T1102	636 032 0826	FILTER
T1201	636 032 0840	FILTER
T1202	636 032 0833	FILTER
T3701	636 027 4020	FILTER.EMI
VR101	636 026 9132	SVR 22K OHM
OR	636 019 7992	SVR 22K OHM
VR102	636 026 9224	SVR 47K OHM
OR	636 019 8074	SVR 47K OHM
VR103	636 026 9224	SVR 47K OHM
OR	636 019 8074	SVR 47K OHM
VR104	636 026 9217	SVR 4.7K OHM
OR	636 019 8067	SVR 4.7K OHM
VR105	636 026 9255	SVR 6.8K OHM
OR	636 019 8104	SVR 6.8K OHM
VR106	636 026 9125	SVR 2.2K OHM
OR	636 019 7985	SVR 2.2K OHM
VR109	636 026 9118	SVR 220 OHM
OR	636 019 7978	SVR 220 OHM
VR111	636 026 9026	SVR 1K OHM
OR	636 019 7893	SVR 1K OHM
VR121	636 026 9125	SVR 2.2K OHM
OR	636 019 7985	SVR 2.2K OHM
VR122	636 026 9026	SVR 1K OHM
OR	636 019 7893	SVR 1K OHM
VR131	636 026 9125	SVR 2.2K OHM
OR	636 019 7985	SVR 2.2K OHM
VR132	636 026 9170	SVR 3.3K OHM
OR	636 019 8029	SVR 3.3K OHM
VR133	636 030 9630	VR 2.2K OHM
OR	636 026 9125	SVR 2.2K OHM
OR	636 019 7985	SVR 2.2K OHM
VR134	636 026 9217	SVR 4.7K OHM
OR	636 019 8067	SVR 4.7K OHM
VR321	636 026 9033	SVR 10K OHM
OR	636 019 7909	SVR 10K OHM
VR351	636 026 9224	SVR 47K OHM
OR	636 019 8074	SVR 47K OHM
VR352	636 026 9040	SVR 100K OHM
OR	636 019 7916	SVR 100K OHM
VR353	636 026 9040	SVR 100K OHM
OR	636 019 7916	SVR 100K OHM
X1201	636 025 5265	FILTER
OR	636 028 5743	FILTER
X1202	636 032 5548	CRYSTAL 4.433619MHZ
OR	636 033 2430	CRYSTAL 4.433619MHZ
X3501	636 030 3171	OSC,CRYSTAL 8.0MHZ
X3701	636 030 3195	OSC,CRYSTAL 5.8MHZ

COMPL,VD-2

COMPL.NO.	636 032 0574	
	636 027 3061	HOLDER
B1801 ⚠	636 030 3034	UNIT,DC-DC CONVERTOR
C1602	403 155 1807	CERAMIC 0.01U K 25V
C1611	403 157 3700	CERAMIC 110P J 50V
C1612	403 113 3805	CERAMIC 1000P K 50V
C1613	403 192 0207	TA-SOLID 4.7U M 6.3V
C1614	403 167 1505	TA-SOLID 6.8U M 6.3V
C1615	403 155 1807	CERAMIC 0.01U K 25V

LOCATION	PARTS NO.	DESCRIPTION
C1616	403 113 3805	CERAMIC 1000P K 50V
C1617	403 113 3805	CERAMIC 1000P K 50V
C1618	403 157 2505	CERAMIC 27P J 50V
C1620	403 155 1807	CERAMIC 0.01U K 25V
C1624	403 113 3805	CERAMIC 1000P K 50V
C1625	403 192 0207	TA-SOLID 4.7U M 6.3V
C1661	403 157 2505	CERAMIC 27P J 50V
C1662	403 155 1500	CERAMIC 180P J 50V
C1663	403 157 2505	CERAMIC 27P J 50V
C1701	403 167 1505	TA-SOLID 6.8U M 6.3V
C1702	403 155 1807	CERAMIC 0.01U K 25V
C1706	403 155 1807	CERAMIC 0.01U K 25V
C1707	403 113 3805	CERAMIC 1000P K 50V
C1708	403 139 7108	CERAMIC 12P J 50V
C1710	403 113 3805	CERAMIC 1000P K 50V
C1711	403 157 8309	CERAMIC 0.1U Z 16V
C1712	403 167 1505	TA-SOLID 6.8U M 6.3V
C1713	403 157 3106	CERAMIC 56P J 50V
C1799	403 042 3006	ELECT 100U M 16V
C1801	403 175 0606	ELECT 100U M 6.3V
OR	403 153 0901	ELECT 100U M 6.3V
C1802	403 155 1807	CERAMIC 0.01U K 25V
C1803	403 155 1302	CERAMIC 150P J 50V
C1804	403 155 1302	CERAMIC 150P J 50V
C1805	403 157 4202	CERAMIC 220P J 50V
C1806	403 153 9300	CERAMIC 82P J 50V
C1807	403 155 1302	CERAMIC 150P J 50V
C1808	403 155 1302	CERAMIC 150P J 50V
C1809	403 157 4202	CERAMIC 220P J 50V
C1811	403 153 9300	CERAMIC 82P J 50V
C1812	403 167 0201	TA-SOLID 3.3U M 6.3V
C1813	403 155 1807	CERAMIC 0.01U K 25V
C1814	403 155 1807	CERAMIC 0.01U K 25V
C1815	403 155 1807	CERAMIC 0.01U K 25V
C1817	403 155 1807	CERAMIC 0.01U K 25V
C1818	403 155 1807	CERAMIC 0.01U K 25V
C1821	403 155 1807	CERAMIC 0.01U K 25V
C1822	403 155 1807	CERAMIC 0.01U K 25V
C1823	403 153 9300	CERAMIC 82P J 50V
C1824	403 153 9300	CERAMIC 82P J 50V
C1825	403 155 1807	CERAMIC 0.01U K 25V
C1826	403 157 1904	CERAMIC 10P D 50V
C1828	403 157 1904	CERAMIC 10P D 50V
C1829	403 155 1807	CERAMIC 0.01U K 25V
C1831	403 155 1807	CERAMIC 0.01U K 25V
C1832	403 167 1505	TA-SOLID 6.8U M 6.3V
C1833	403 155 1807	CERAMIC 0.01U K 25V
C1834	403 167 0201	TA-SOLID 3.3U M 6.3V
C1836	403 153 9300	CERAMIC 82P J 50V
C1837	403 157 4202	CERAMIC 220P J 50V
C1838	403 139 7108	CERAMIC 12P J 50V
C1839	403 196 3105	CERAMIC 1U Z 16V
C1841	403 167 0201	TA-SOLID 3.3U M 6.3V
C1842	403 167 1505	TA-SOLID 6.8U M 6.3V
C1843	403 155 1807	CERAMIC 0.01U K 25V
C1844	403 175 0606	ELECT 100U M 6.3V
OR	403 153 0901	ELECT 100U M 6.3V
C1845	403 155 1807	CERAMIC 0.01U K 25V
C1846	403 162 3900	ELECT 47U M 4V
OR	403 152 9608	ELECT 47U M 4V
D1611	407 113 5609	DIODE DSH015-TL
D1612	407 113 5609	DIODE DSH015-TL
D1701	407 099 2906	VARACTOR DI 1SV200-11TLC
D1702	407 113 5609	DIODE DSH015-TL
D1794	407 132 6007	LED BR3432S
D1796	407 106 1601	DEODE DCG015-TL
D1798	407 106 1601	DEODE DCG015-TL

LOCATION	PARTS NO.	DESCRIPTION
IC161	409 176 0003	IC CXA1203N-T3
IC171	409 179 5708	IC LC92018B-308
IC174	410 067 1900	IC SRM20256LM10
OR	410 067 2006	IC SRM20256LM12
OR	410 063 4068	IC HM62256LF10TDZ
OR	410 063 4806	IC HM62256LF12TDZ
OR	410 063 5001	IC HM62256LF15TDZ
IC181	409 144 2503	IC AN2020S-(T1)
IC182	409 183 1000	IC NJM2233BM(T1)
IC183	409 144 2602	IC UPC311G2-T1
IC184	409 152 5404	IC TC7S08F(TE85L)
OR	409 181 4300	IC SC7S08FEL
IC186	409 157 7908	IC BU74HC00F-T1
IC187	409 215 1800	IC BU4013BF-T1
IC188	409 167 7202	IC NJM2406F-TE1
L1601	636 019 8579	COIL,INDUCTOR 100UH
L1602	636 003 2491	HF CHOKE,56UH
L1604	636 003 2491	HF CHOKE,56UH
L1661	636 028 1844	COIL,INDUCTOR 8.2UH
L1701	636 019 8647	COIL,INDUCTOR 22UH
L1703	636 003 2491	HF CHOKE,56UH
L1704	636 019 8647	COIL,INDUCTOR 22UH
L1802	636 019 8661	COIL,INDUCTOR 220UH
L1803	636 019 8647	COIL,INDUCTOR 22UH
L1804	636 019 8661	COIL,INDUCTOR 220UH
L1805	636 019 8647	COIL,INDUCTOR 22UH
L1806	636 019 8647	COIL,INDUCTOR 22UH
Q1602	405 077 3402	TR 2SC4211-6-TL
Q1611	405 077 3402	TR 2SC4211-6-TL
Q1701	405 078 6709	TR 2SC4396-TL
Q1799	405 078 6105	TR 2SA1677-TL
Q1801	405 082 9000	TR IMZ2-T99
Q1802	405 074 0701	TR IMX2-109
Q1804	405 082 9000	TR IMZ2-T99
Q1805	405 074 0701	TR IMX2-109
Q1807	405 077 3402	TR 2SC4211-6-TL
Q1808	405 077 3402	TR 2SC4211-6-TL
Q1809	405 077 3402	TR 2SC4211-6-TL
Q1811	405 077 2207	TR 2SA1622-6-TL
Q1813	405 077 3402	TR 2SC4211-6-TL
Q1814	405 077 3402	TR 2SC4211-6-TL
Q1815	405 077 3402	TR 2SC4211-6-TL
Q1816	405 077 2207	TR 2SA1622-6-TL
Q1817	405 077 3402	TR 2SC4211-6-TL
Q1818	405 078 6709	TR 2SC4396-TL
Q1819	405 008 7707	TR 2SB815-B7
Q1821	405 078 6709	TR 2SC4396-TL
Q1851	405 077 3402	TR 2SC4211-6-TL
R1601	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1602	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1605	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1611	401 105 5202	MT-GLAZE 470 JA 1/16W
R1612	401 105 0603	MT-GLAZE 10K JA 1/16W
R1614	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1616	401 105 0702	MT-GLAZE 100K JA 1/16W
R1617	401 105 2904	MT-GLAZE 22K JA 1/16W
R1618	401 105 2706	MT-GLAZE 220 JA 1/16W
R1619	401 105 0504	MT-GLAZE 1K JA 1/16W
R1620	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1621	401 105 0702	MT-GLAZE 100K JA 1/16W
R1622	401 105 2904	MT-GLAZE 22K JA 1/16W
R1623	401 105 4205	MT-GLAZE 33K JA 1/16W
R1624	401 105 5400	MT-GLAZE 47K JA 1/16W
R1625	401 105 2904	MT-GLAZE 22K JA 1/16W
R1626	401 105 6506	MT-GLAZE 680 JA 1/16W
R1627	401 105 6001	MT-GLAZE 5.6K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R1634	401 105 5400	MT-GLAZE 47K JA 1/16W
R1635	401 105 3406	MT-GLAZE 27K JA 1/16W
R1636	401 105 0603	MT-GLAZE 10K JA 1/16W
R1637	401 105 5905	MT-GLAZE 560 JA 1/16W
R1638	401 105 0603	MT-GLAZE 10K JA 1/16W
R1703	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1707	401 105 0702	MT-GLAZE 100K JA 1/16W
R1712	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1713	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1714	401 105 0603	MT-GLAZE 10K JA 1/16W
R1715	401 105 0603	MT-GLAZE 10K JA 1/16W
R1717	401 105 0603	MT-GLAZE 10K JA 1/16W
R1718	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1721	401 105 0603	MT-GLAZE 10K JA 1/16W
R1722	401 105 0603	MT-GLAZE 10K JA 1/16W
R1723	401 105 0603	MT-GLAZE 10K JA 1/16W
R1724	401 105 0603	MT-GLAZE 10K JA 1/16W
R1725	401 105 0603	MT-GLAZE 10K JA 1/16W
R1727	401 105 0603	MT-GLAZE 10K JA 1/16W
R1731	401 105 0504	MT-GLAZE 1K JA 1/16W
R1733	401 105 0702	MT-GLAZE 100K JA 1/16W
R1734	401 105 0702	MT-GLAZE 100K JA 1/16W
R1735	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R1798	401 105 6506	MT-GLAZE 680 JA 1/16W
R1801	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1802	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1803	401 105 2102	MT-GLAZE 18K JA 1/16W
R1804	401 105 4700	MT-GLAZE 39K JA 1/16W
R1805	401 105 1600	MT-GLAZE 15K JA 1/16W
R1806	401 105 3406	MT-GLAZE 27K JA 1/16W
R1807	401 113 6208	MT-GLAZE 3.6K JA 1/16W
R1808	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1809	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1810	401 105 4502	MT-GLAZE 390 JA 1/16W
R1811	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1812	401 113 5607	MT-GLAZE 750 JA 1/16W
R1813	401 105 0504	MT-GLAZE 1K JA 1/16W
R1814	401 105 0504	MT-GLAZE 1K JA 1/16W
R1815	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1816	401 105 0504	MT-GLAZE 1K JA 1/16W
R1817	401 105 0504	MT-GLAZE 1K JA 1/16W
R1818	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1819	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1820	401 105 4502	MT-GLAZE 390 JA 1/16W
R1821	401 105 1600	MT-GLAZE 15K JA 1/16W
R1822	401 105 3406	MT-GLAZE 27K JA 1/16W
R1823	401 113 6208	MT-GLAZE 3.6K JA 1/16W
R1824	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1825	401 113 5607	MT-GLAZE 750 JA 1/16W
R1826	401 105 0504	MT-GLAZE 1K JA 1/16W
R1827	401 105 0504	MT-GLAZE 1K JA 1/16W
R1828	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1829	401 105 0504	MT-GLAZE 1K JA 1/16W
R1831	401 105 0504	MT-GLAZE 1K JA 1/16W
R1832	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1833	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1834	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1835	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R1836	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R1837	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R1838	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1839	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R1841	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R1842	401 105 0504	MT-GLAZE 1K JA 1/16W
R1843	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1844	401 105 1600	MT-GLAZE 15K JA 1/16W
R1845	401 105 0603	MT-GLAZE 10K JA 1/16W
R1846	401 105 0504	MT-GLAZE 1K JA 1/16W
R1847	401 105 0504	MT-GLAZE 1K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R1849	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1851	401 105 0504	MT-GLAZE 1K JA 1/16W
R1852	401 105 0504	MT-GLAZE 1K JA 1/16W
R1853	401 105 0504	MT-GLAZE 1K JA 1/16W
R1855	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1856	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1857	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1858	401 105 0504	MT-GLAZE 1K JA 1/16W
R1859	401 105 0504	MT-GLAZE 1K JA 1/16W
R1860	401 105 2904	MT-GLAZE 22K JA 1/16W
R1861	401 105 0504	MT-GLAZE 1K JA 1/16W
R1862	401 105 5905	MT-GLAZE 560 JA 1/16W
R1863	401 105 5400	MT-GLAZE 47K JA 1/16W
R1864	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1865	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1866	401 105 7909	MT-GLAZE 0 ZA 1/16W
R1867	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R1868	401 105 0504	MT-GLAZE 1K JA 1/16W
R1869	401 105 6506	MT-GLAZE 680 JA 1/16W
R1870	401 105 2904	MT-GLAZE 22K JA 1/16W
R1871	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R1872	401 105 6506	MT-GLAZE 680 JA 1/16W
R1873	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1874	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R1875	401 105 4205	MT-GLAZE 33K JA 1/16W
R1876	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R1877	401 105 5400	MT-GLAZE 47K JA 1/16W
R1878	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1879	401 105 0603	MT-GLAZE 10K JA 1/16W
R1880	401 105 5905	MT-GLAZE 560 JA 1/16W
R1881	401 105 0405	MT-GLAZE 100 JA 1/16W
R1882	401 037 5004	MT-GLAZE 0 ZA 1/10W
S1797	636 030 3027	SW.PUSH
S1798	636 024 1855	SW.PUSH
S1799	636 030 3164	SW.SLIDE
VC171	636 026 4007	CAP.TRIM 20P-W
VR181	636 026 9033	SVR 10K OHM
OR	636 019 7909	SVR 10K OHM
VR182	636 026 9033	SVR 10K OHM
OR	636 019 7909	SVR 10K OHM
VR184	636 026 9026	SVR 1K OHM
OR	636 019 7893	SVR 1K OHM

COMPL,AD-1

LOCATION	PARTS NO.	DESCRIPTION
COMPL.NO.	636 032 0581	
	636 030 0743	HOLDER.E
A2901	636 025 1557	REMOCON RECEIVER
C2001	403 113 4109	CERAMIC 2200P K 50V
C2002	403 157 3106	CERAMIC 56P J 50V
C2003	403 155 1807	CERAMIC 0.01U K 25V
C2005	403 167 0607	TA-SOLID 1U M 16V
C2006	403 191 9904	TA-SOLID 47U M 4V
OR	403 166 2107	TA-SOLID 47U M 4V
C2008	403 167 1406	TA-SOLID 10U M 4V
C2009	403 113 4109	CERAMIC 2200P K 50V
C2010	403 157 8309	CERAMIC 0.1U Z 16V
C2011	403 191 9904	TA-SOLID 47U M 4V
OR	403 166 2107	TA-SOLID 47U M 4V
C2012	403 167 1406	TA-SOLID 10U M 4V
C2013	403 167 0607	TA-SOLID 1U M 16V
C2014	403 167 0003	TA-SOLID 4.7U M 4V
OR	403 089 6206	TA-SOLID 4.7U M 4V

LOCATION	PARTS NO.	DESCRIPTION
C2015	403 157 4202	CERAMIC 220P J 50V
C2016	403 167 0003	TA-SOLID 4.7U M 4V
OR	403 089 6206	TA-SOLID 4.7U M 4V
C2017	403 167 0607	TA-SOLID 1U M 16V
C2018	403 167 0003	TA-SOLID 4.7U M 4V
OR	403 089 6206	TA-SOLID 4.7U M 4V
C2019	403 192 0801	TA-SOLID 22U M 6.3V
C2020	403 157 8309	CERAMIC 0.1U Z 16V
C2021	403 130 3604	CERAMIC 0.047U K 25V
C2022	403 130 3604	CERAMIC 0.047U K 25V
C2023	403 130 3604	CERAMIC 0.047U K 25V
C2024	403 155 2200	CERAMIC 3300P K 50V
C2025	403 167 0607	TA-SOLID 1U M 16V
C2026	403 167 0003	TA-SOLID 4.7U M 4V
OR	403 089 6206	TA-SOLID 4.7U M 4V
C2027	403 191 9904	TA-SOLID 47U M 4V
OR	403 166 2107	TA-SOLID 47U M 4V
C2028	403 113 3805	CERAMIC 1000P K 50V
C2029	403 167 0003	TA-SOLID 4.7U M 4V
OR	403 089 6206	TA-SOLID 4.7U M 4V
C2030	403 143 3608	TA-SOLID 47U M 6.3V
C2032	403 157 8309	CERAMIC 0.1U Z 16V
C2033	403 113 3805	CERAMIC 1000P K 50V
C2034	403 113 3805	CERAMIC 1000P K 50V
C2035	403 157 3106	CERAMIC 56P J 50V
C2401	403 167 0607	TA-SOLID 1U M 16V
C2402	403 167 0607	TA-SOLID 1U M 16V
C2403	403 157 4202	CERAMIC 220P J 50V
C2601	403 192 0405	TA-SOLID 10U M 6.3V
OR	403 158 8308	TA-SOLID 10U M 6.3V
C2602	403 192 0801	TA-SOLID 22U M 6.3V
C2901	403 192 0405	TA-SOLID 10U M 6.3V
OR	403 158 8308	TA-SOLID 10U M 6.3V
D2401	407 057 8902	ZENER DIODE RD8.2MB2
D2901	407 132 6007	LED BR3432S
IC201	409 218 7007	IC LA7452W
IC261	409 225 0008	IC UPC4572G2-T1
OR	409 166 7203	IC M5218FP-73A
L2901	636 019 8579	COIL,INDUCTOR 100UH
Q2001	405 077 3402	TR 2SC4211-6-TL
Q2002	405 078 6105	TR 2SA1677-TL
Q2040	405 008 7707	TR 2SB815-B7
Q2041	405 078 6709	TR 2SC4396-TL
Q2601	405 077 3402	TR 2SC4211-6-TL
Q2901	405 078 6105	TR 2SA1677-TL
R2001	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R2002	401 105 6407	MT-GLAZE 68 JA 1/16W
R2004	401 105 4205	MT-GLAZE 33K JA 1/16W
R2005	401 105 0603	MT-GLAZE 10K JA 1/16W
R2006	401 105 2904	MT-GLAZE 22K JA 1/16W
R2007	401 114 0908	MT-GLAZE 3.3M JA 1/16W
R2008	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R2009	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R2012	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2013	401 105 0603	MT-GLAZE 10K JA 1/16W
R2014	401 105 0504	MT-GLAZE 1K JA 1/16W
R2016	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R2017	401 105 2904	MT-GLAZE 22K JA 1/16W
R2018	401 105 4205	MT-GLAZE 33K JA 1/16W
R2019	401 105 0306	MT-GLAZE 10 JA 1/16W
R2021	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2022	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R2023	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2025	401 105 2904	MT-GLAZE 22K JA 1/16W
R2026	401 105 2706	MT-GLAZE 220 JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R2031	401 105 0504	MT-GLAZE 1K JA 1/16W
R2040	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2401	401 105 3406	MT-GLAZE 27K JA 1/16W
R2402	401 105 4205	MT-GLAZE 33K JA 1/16W
R2403	401 105 0702	MT-GLAZE 100K JA 1/16W
R2404	401 105 1105	MT-GLAZE 12K JA 1/16W
R2405	401 105 5202	MT-GLAZE 470 JA 1/16W
R2501	401 105 3406	MT-GLAZE 27K JA 1/16W
R2502	401 105 4205	MT-GLAZE 33K JA 1/16W
R2503	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2601	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R2701	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2702	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2703	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2704	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2705	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2706	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2707	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2708	401 105 7909	MT-GLAZE 0 ZA 1/16W
R2901	401 105 5202	MT-GLAZE 470 JA 1/16W
VR201	636 026 9033	SVR 10K OHM
VR202	636 026 9033	SVR 10K OHM

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COMPL.NO. 636 032 0598

LOCATION	PARTS NO.	DESCRIPTION
C2802	403 130 3604	CERAMIC 0.047U K 25V
C2803	403 155 1807	CERAMIC 0.01U K 25V
C2804	403 155 1807	CERAMIC 0.01U K 25V
C2805	403 155 1807	CERAMIC 0.01U K 25V
C2806	403 155 1807	CERAMIC 0.01U K 25V
C2807	403 167 1208	TA-SOLID 0.22U M 35V
OR	403 092 6606	TA-SOLID 0.22U M 35V
C2808	403 157 8309	CERAMIC 0.1U Z 16V
OR	403 164 0204	CERAMIC 0.1U Z 25V
CN281	636 024 2265	JACK,MIC
Q2801	405 077 3402	TR 2SC4211-6-TL
R2801	401 105 1006	MT-GLAZE 1.2K JA 1/16W
R2802	401 105 8104	MT-GLAZE 56K JA 1/16W
R2803	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R2804	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R2805	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2806	401 105 4502	MT-GLAZE 390 JA 1/16W
R2807	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R2808	401 105 0504	MT-GLAZE 1K JA 1/16W
R2809	401 105 0504	MT-GLAZE 1K JA 1/16W
R2810	401 105 7909	MT-GLAZE 0 ZA 1/16W

COMPL,SY-1

COMPL.NO. 636 031 8588

LOCATION	PARTS NO.	DESCRIPTION
	636 032 2103	SPACER,G
C3001	403 155 1609	CERAMIC 33P J 50V
C3002	403 155 1609	CERAMIC 33P J 50V
C3003	403 155 1609	CERAMIC 33P J 50V
C3004	403 157 3601	CERAMIC 100P J 50V
C3005	403 157 3601	CERAMIC 100P J 50V
C3006	403 157 3601	CERAMIC 100P J 50V
C3007	403 134 7400	CERAMIC 1U Z 16V
C3008	403 152 9707	ELECT 22U M 6.3V
C3009	403 155 1807	CERAMIC 0.01U K 25V
C3010	403 134 7400	CERAMIC 1U Z 16V
CT301	636 026 4014	CAP,TRIM 30P-W

LOCATION	PARTS NO.	DESCRIPTION
D3001	407 100 7302	DIODE IMN10-T109
OR	407 125 0906	DIODE MA121-TW
D3002	407 100 7302	DIODE IMN10-T109
OR	407 125 0906	DIODE MA121-TW
D3003	407 100 7302	DIODE IMN10-T109
OR	407 125 0906	DIODE MA121-TW
D3004	407 130 4500	DIODE DAP202U-T106
OR	407 106 1502	DIODE DCF015-TL
D3005	407 100 7302	DIODE IMN10-T109
OR	407 125 0906	DIODE MA121-TW
D3010	407 106 1601	DEODE DCG015-TL
OR	407 130 4401	DIODE DAN202U-T106
D3011	407 130 4500	DIODE DAP202U-T106
OR	407 106 1502	DIODE DCF015-TL
IC301	410 101 8209	IC UPD75306GF-116-3B9
IC302	409 202 0502	IC SCI7701YFA-T1
Q3001	405 096 4404	TR DTC144TU-T106
OR	405 103 1006	TR UN5210-R-TX
Q3002	405 096 4404	TR DTC144TU-T106
OR	405 103 1006	TR UN5210-R-TX
Q3003	405 096 4404	TR DTC144TU-T106
OR	405 103 1006	TR UN5210-R-TX
Q3004	405 096 4404	TR DTC144TU-T106
OR	405 103 1006	TR UN5210-R-TX
Q3006	405 096 4404	TR DTC144TU-T106
OR	405 103 1006	TR UN5210-R-TX
Q3007	405 089 6002	TR FC108-TL
OR	405 060 7509	TR FMG2-T99
R3002	401 105 4304	MT-GLAZE 330K JA 1/16W
R3003	401 105 0603	MT-GLAZE 10K JA 1/16W
R3004	401 105 0603	MT-GLAZE 10K JA 1/16W
R3005	401 105 0603	MT-GLAZE 10K JA 1/16W
R3006	401 105 0603	MT-GLAZE 10K JA 1/16W
R3007	401 105 0603	MT-GLAZE 10K JA 1/16W
R3008	401 105 0603	MT-GLAZE 10K JA 1/16W
R3009	401 105 0603	MT-GLAZE 10K JA 1/16W
R3010	401 105 0603	MT-GLAZE 10K JA 1/16W
R3011	401 105 5400	MT-GLAZE 47K JA 1/16W
R3012	401 105 5400	MT-GLAZE 47K JA 1/16W
R3013	401 105 5400	MT-GLAZE 47K JA 1/16W
R3014	401 105 5400	MT-GLAZE 47K JA 1/16W
R3015	401 105 5400	MT-GLAZE 47K JA 1/16W
R3016	401 105 5400	MT-GLAZE 47K JA 1/16W
R3020	401 105 7909	MT-GLAZE 0 ZA 1/16W
R3022	401 105 0603	MT-GLAZE 10K JA 1/16W
R3024	401 105 0603	MT-GLAZE 10K JA 1/16W
R3025	401 105 0702	MT-GLAZE 100K JA 1/16W
R3026	401 105 0702	MT-GLAZE 100K JA 1/16W
R3027	401 105 0702	MT-GLAZE 100K JA 1/16W
R3028	401 105 0702	MT-GLAZE 100K JA 1/16W
R3029	401 105 0504	MT-GLAZE 1K JA 1/16W
R3030	401 105 0504	MT-GLAZE 1K JA 1/16W
R3034	401 105 0702	MT-GLAZE 100K JA 1/16W
R3035	401 105 0702	MT-GLAZE 100K JA 1/16W
R3036	401 105 0603	MT-GLAZE 10K JA 1/16W
R3037	401 105 0603	MT-GLAZE 10K JA 1/16W
R3038	401 105 0603	MT-GLAZE 10K JA 1/16W
R3039	401 105 0603	MT-GLAZE 10K JA 1/16W
R3050	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3051	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3052	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3053	401 105 5301	MT-GLAZE 4.7K JA 1/16W
X3001	636 000 5099	CRYSTAL
OR	636 025 5876	OSC.CRYSTAL 32.768MHZ
X3002	636 030 5151	RESONATOR,CERAMIC 4MHZ

LOCATION	PARTS NO.	DESCRIPTION
COMPL,SY-2		
COMPL.NO.	636 031 8595	
C3101	403 157 3601	CERAMIC 100P J 50V
C3102	403 113 3805	CERAMIC 1000P K 50V
C3103	403 113 3805	CERAMIC 1000P K 50V
CN312	636 031 9066	JACK,LANC
D3101	407 057 8902	ZENER DIODE RD8.2MB2
D3102	407 054 4204	ZENER DIODE RD12MB2
Q3101	405 089 6002	TR FC108-TL
OR	405 060 7509	TR FMG2-T99
Q3102	405 087 9500	TR FC101-TL
OR	405 082 8706	TR IMT1-T110
Q3103	405 006 8904	TR 2SB1121-T-TD
Q3104	405 078 4300	TR 2SC4398-TL
R3101	401 105 5400	MT-GLAZE 47K JA 1/16W
R3102	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R3103	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3104	401 098 8501	MT-GLAZE 2.7 JA 1/8W
R3105	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3106	401 105 1006	MT-GLAZE 1.2K JA 1/16W
COMPL,CA-1		
COMPL.NO.	636 031 8618	
C9001	403 155 1807	CERAMIC 0.01U K 25V
C9002	403 157 3205	CERAMIC 62P J 50V
C9004	403 113 3805	CERAMIC 1000P K 50V
C9006	403 155 1807	CERAMIC 0.01U K 25V
C9007	403 155 1807	CERAMIC 0.01U K 25V
C9008	403 203 0509	TA-SOLID 6.8U M 6.3V
C9010	403 113 3805	CERAMIC 1000P K 50V
C9011	403 152 9707	ELECT 22U M 6.3V
C9012	403 155 1807	CERAMIC 0.01U K 25V
C9013	403 113 3805	CERAMIC 1000P K 50V
C9014	403 155 2309	CERAMIC 4700P K 50V
C9017	403 203 1407	TA-SOLID 1U M 16V
C9018	403 202 6908	TA-SOLID 3.3U M 6.3V
C9019	403 113 3805	CERAMIC 1000P K 50V
C9020	403 157 3601	CERAMIC 100P J 50V
C9021	403 203 3708	TA-SOLID 1U M 35V
C9022	403 203 3708	TA-SOLID 1U M 35V
C9023	403 176 0209	CERAMIC 0.1U Z 25V
C9025	403 176 0209	CERAMIC 0.1U Z 25V
C9026	403 203 3708	TA-SOLID 1U M 35V
C9027	403 153 0901	ELECT 100U M 6.3V
C9029	403 203 0509	TA-SOLID 6.8U M 6.3V
C9031	403 155 1807	CERAMIC 0.01U K 25V
C9032	403 176 0209	CERAMIC 0.1U Z 25V
C9033	403 176 0209	CERAMIC 0.1U Z 25V
C9034	403 203 0509	TA-SOLID 6.8U M 6.3V
C9035	403 157 2901	CERAMIC 47P J 50V
C9036	403 068 0409	TA-SOLID 0.1U Z 25V
C9037	403 176 0209	CERAMIC 0.1U Z 25V
C9038	403 152 9707	ELECT 22U M 6.3V
C9041	403 203 3302	TA-SOLID 0.22U M 35V
C9043	403 176 0209	CERAMIC 0.1U Z 25V
C9045	403 155 1807	CERAMIC 0.01U K 25V
C9046	403 203 1407	TA-SOLID 1U M 16V
C9047	403 176 0209	CERAMIC 0.1U Z 25V
C9048	403 176 0209	CERAMIC 0.1U Z 25V
C9049	403 176 0209	CERAMIC 0.1U Z 25V
C9050	403 176 0209	CERAMIC 0.1U Z 25V
C9051	403 157 2901	CERAMIC 47P J 50V
C9052	403 176 0209	CERAMIC 0.1U Z 25V

LOCATION	PARTS NO.	DESCRIPTION
C9053	403 152 9707	ELECT 22U M 6.3V
C9054	403 157 7609	CERAMIC 0.022U Z 25V
C9055	403 176 0209	CERAMIC 0.1U Z 25V
C9056	403 203 1407	TA-SOLID 1U M 16V
C9059	403 203 1407	TA-SOLID 1U M 16V
C9061	403 176 0209	CERAMIC 0.1U Z 25V
C9062	403 203 1407	TA-SOLID 1U M 16V
C9063	403 203 1407	TA-SOLID 1U M 16V
C9065	403 176 0209	CERAMIC 0.1U Z 25V
C9067	403 157 7609	CERAMIC 0.022U Z 25V
C9068	403 176 0209	CERAMIC 0.1U Z 25V
C9069	403 176 0209	CERAMIC 0.1U Z 25V
C9071	403 176 0209	CERAMIC 0.1U Z 25V
C9072	403 203 1407	TA-SOLID 1U M 16V
C9073	403 203 1407	TA-SOLID 1U M 16V
C9074	403 176 0209	CERAMIC 0.1U Z 25V
C9075	403 176 0209	CERAMIC 0.1U Z 25V
C9076	403 155 1807	CERAMIC 0.01U K 25V
C9078	403 153 0901	ELECT 100U M 6.3V
C9081	403 203 1407	TA-SOLID 1U M 16V
C9082	403 176 0209	CERAMIC 0.1U Z 25V
C9085	403 152 9707	ELECT 22U M 6.3V
C9089	403 176 0209	CERAMIC 0.1U Z 25V
C9091	403 176 0209	CERAMIC 0.1U Z 25V
C9092	403 152 9707	ELECT 22U M 6.3V
C9093	403 155 1807	CERAMIC 0.01U K 25V
C9097	403 176 0209	CERAMIC 0.1U Z 25V
C9098	403 176 0209	CERAMIC 0.1U Z 25V
C9099	403 113 3805	CERAMIC 1000P K 50V
C9103	403 176 0209	CERAMIC 0.1U Z 25V
C9107	403 203 1407	TA-SOLID 1U M 16V
C9109	403 157 3601	CERAMIC 100P J 50V
C9111	403 155 1807	CERAMIC 0.01U K 25V
C9113	403 176 0209	CERAMIC 0.1U Z 25V
C9114	403 176 0209	CERAMIC 0.1U Z 25V
C9115	403 203 1407	TA-SOLID 1U M 16V
C9116	403 176 0209	CERAMIC 0.1U Z 25V
C9117	403 176 0209	CERAMIC 0.1U Z 25V
C9118	403 176 0209	CERAMIC 0.1U Z 25V
C9119	403 176 0209	CERAMIC 0.1U Z 25V
C9121	403 176 0209	CERAMIC 0.1U Z 25V
C9122	403 203 3302	TA-SOLID 0.22U M 35V
C9123	403 157 1904	CERAMIC 10P D 50V
C9131	403 139 7306	CERAMIC 18P J 50V
C9132	403 113 3805	CERAMIC 1000P K 50V
C9133	403 176 0209	CERAMIC 0.1U Z 25V
C9134	403 176 0209	CERAMIC 0.1U Z 25V
C9135	403 176 0209	CERAMIC 0.1U Z 25V
D9101	407 134 7200	DIODE MA141K-TX
D9102	407 134 7200	DIODE MA141K-TX
D9103	407 134 7309	DIODE MA141WA-TX
D9104	407 130 2605	DIODE MA143A-TX
D9105	407 134 7200	DIODE MA141K-TX
F9101 ⚠	404 040 5306	CERAMIC 47P M 100V
F9102 ⚠	404 040 5504	CERAMIC 470P M 100V
F9103 ⚠	404 040 5504	CERAMIC 470P M 100V
F9104 ⚠	636 003 5379	CORE
IC901	409 183 2007	IC CXD1159Q-T3
IC902	409 223 9201	IC CXD1253R-T3
IC903	409 212 8406	IC CXD1250N-T3
IC904	409 223 9300	IC CXA1390R-T3
IC905	409 223 9409	IC CXA1391R-T3
IC906	409 223 9607	IC CXL1508N-T3
IC908	409 223 9508	IC CXA1392R-T3
IC912	409 155 7306	IC TC4S71F(TE85L)

LOCATION	PARTS NO.	DESCRIPTION
L9101	636 002 8821	RF CHOKE,10UH
L9102	636 002 8821	RF CHOKE,10UH
L9106	636 002 8821	RF CHOKE,10UH
L9108	636 003 2415	HF CHOKE,12UH
Q9101	405 079 6302	TR 2SC4399-5-TL
Q9102	405 102 5500	TR 2SB1218A-R-TX
Q9103	405 102 5104	TR XN5501-TW
Q9104	405 102 5609	TR 2SD1819A-R-TX
Q9105	405 102 5500	TR 2SB1218A-R-TX
Q9106	405 102 5609	TR 2SD1819A-R-TX
Q9107	405 102 5500	TR 2SB1218A-R-TX
Q9108	405 102 5609	TR 2SD1819A-R-TX
Q9109	405 102 5500	TR 2SB1218A-R-TX
Q9112	405 102 5500	TR 2SB1218A-R-TX
Q9114	405 102 5500	TR 2SB1218A-R-TX
Q9121	405 102 5609	TR 2SD1819A-R-TX
Q9124	405 082 9000	TR IMZ2-T99
Q9125	405 082 9000	TR IMZ2-T99
Q9126	405 102 5104	TR XN5501-TW
R9001	401 105 2706	MT-GLAZE 220 JA 1/16W
R9002	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R9003	401 105 1402	MT-GLAZE 150 JA 1/16W
R9004	401 037 5004	MT-GLAZE 0 ZA 1/10W
R9005	401 105 0306	MT-GLAZE 10 JA 1/16W
R9006	401 105 0702	MT-GLAZE 100K JA 1/16W
R9007	401 105 0603	MT-GLAZE 10K JA 1/16W
R9008	401 105 8203	MT-GLAZE 68K JA 1/16W
R9009	401 105 8005	MT-GLAZE 1M JA 1/16W
R9010	401 037 5004	MT-GLAZE 0 ZA 1/10W
R9011	401 105 0405	MT-GLAZE 100 JA 1/16W
R9012	401 105 8005	MT-GLAZE 1M JA 1/16W
R9014	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9015	401 105 0603	MT-GLAZE 10K JA 1/16W
R9016	401 105 0702	MT-GLAZE 100K JA 1/16W
R9017	401 105 8104	MT-GLAZE 56K JA 1/16W
R9018	401 105 2904	MT-GLAZE 22K JA 1/16W
R9019	401 105 1600	MT-GLAZE 15K JA 1/16W
R9021	401 105 1709	MT-GLAZE 150K JA 1/16W
R9022	401 105 1600	MT-GLAZE 15K JA 1/16W
R9023	401 105 1600	MT-GLAZE 15K JA 1/16W
R9024	401 105 8005	MT-GLAZE 1M JA 1/16W
R9025	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9027	401 105 2102	MT-GLAZE 18K JA 1/16W
R9028	401 105 2102	MT-GLAZE 18K JA 1/16W
R9029	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9032	401 105 0603	MT-GLAZE 10K JA 1/16W
R9033	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9034	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9035	401 105 0603	MT-GLAZE 10K JA 1/16W
R9036	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9037	401 105 0603	MT-GLAZE 10K JA 1/16W
R9038	401 105 0603	MT-GLAZE 10K JA 1/16W
R9039	401 105 3406	MT-GLAZE 27K JA 1/16W
R9041	401 105 0603	MT-GLAZE 10K JA 1/16W
R9042	401 105 0603	MT-GLAZE 10K JA 1/16W
R9043	401 105 0504	MT-GLAZE 1K JA 1/16W
R9044	401 105 2904	MT-GLAZE 22K JA 1/16W
R9045	401 105 5400	MT-GLAZE 47K JA 1/16W
R9046	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9047	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R9048	401 105 4304	MT-GLAZE 330K JA 1/16W
R9049	401 105 1105	MT-GLAZE 12K JA 1/16W
R9051	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R9052	401 105 4205	MT-GLAZE 33K JA 1/16W
R9054	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9055	401 105 0504	MT-GLAZE 1K JA 1/16W
R9056	401 105 0504	MT-GLAZE 1K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R9057	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R9058	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9059	401 105 0603	MT-GLAZE 10K JA 1/16W
R9062	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R9063	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R9065	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9070	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R9071	401 105 3406	MT-GLAZE 27K JA 1/16W
R9072	401 105 4700	MT-GLAZE 39K JA 1/16W
R9073	401 105 8104	MT-GLAZE 56K JA 1/16W
R9074	401 105 1105	MT-GLAZE 12K JA 1/16W
R9075	401 105 3406	MT-GLAZE 27K JA 1/16W
R9076	401 105 3406	MT-GLAZE 27K JA 1/16W
R9077	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R9078	401 105 0603	MT-GLAZE 10K JA 1/16W
R9080	401 105 0504	MT-GLAZE 1K JA 1/16W
R9082	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9083	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R9084	401 105 5202	MT-GLAZE 470 JA 1/16W
R9085	401 105 1600	MT-GLAZE 15K JA 1/16W
R9086	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R9087	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9089	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9090	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R9093	401 105 2706	MT-GLAZE 220 JA 1/16W
R9094	401 105 2706	MT-GLAZE 220 JA 1/16W
R9095	401 105 1105	MT-GLAZE 12K JA 1/16W
R9096	401 105 3406	MT-GLAZE 27K JA 1/16W
R9098	401 105 1105	MT-GLAZE 12K JA 1/16W
R9099	401 105 2102	MT-GLAZE 18K JA 1/16W
R9101	401 105 0603	MT-GLAZE 10K JA 1/16W
R9102	401 105 0603	MT-GLAZE 10K JA 1/16W
R9111	401 105 3406	MT-GLAZE 27K JA 1/16W
R9113	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9114	401 105 0603	MT-GLAZE 10K JA 1/16W
R9134	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9137	401 105 0702	MT-GLAZE 100K JA 1/16W
R9139	401 105 0603	MT-GLAZE 10K JA 1/16W
R9141	401 105 2904	MT-GLAZE 22K JA 1/16W
R9144	401 105 4700	MT-GLAZE 39K JA 1/16W
R9148	401 105 0603	MT-GLAZE 10K JA 1/16W
R9149	401 037 6803	MT-GLAZE 12K JA 1/10W
R9151	401 037 8005	MT-GLAZE 15K JA 1/10W
R9152	401 105 0504	MT-GLAZE 1K JA 1/16W
R9153	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R9162	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9163	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9165	401 105 0702	MT-GLAZE 100K JA 1/16W
R9170	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9171	401 105 3406	MT-GLAZE 27K JA 1/16W
R9172	401 105 1600	MT-GLAZE 15K JA 1/16W
R9173	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9175	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9176	401 105 1600	MT-GLAZE 15K JA 1/16W
R9181	401 105 2904	MT-GLAZE 22K JA 1/16W
R9182	401 105 0603	MT-GLAZE 10K JA 1/16W
R9183	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R9184	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9185	401 105 0504	MT-GLAZE 1K JA 1/16W
R9186	401 105 2904	MT-GLAZE 22K JA 1/16W
R9187	401 105 0603	MT-GLAZE 10K JA 1/16W
R9188	401 105 1501	MT-GLAZE 1.5K JA 1/16W
R9189	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9190	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9191	401 105 0504	MT-GLAZE 1K JA 1/16W
R9192	401 105 0504	MT-GLAZE 1K JA 1/16W
R9193	401 105 0504	MT-GLAZE 1K JA 1/16W
R9194	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9195	401 148 6006	MT-GLAZE 2.2 JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R9196	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R9197	401 105 0702	MT-GLAZE 100K JA 1/16W
R9199	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9905	401 105 7909	MT-GLAZE 0 ZA 1/16W
T9101	636 031 8984	FILTER 4MHZ
T9102	636 033 4038	FILTER
T9104	636 031 3187	FILTER 4MHZ
VC911	407 099 2906	VARACTOR DI 1SV200-11TLC
VR901	636 031 0254	VR 47K OHM
VR902	636 031 0254	VR 47K OHM
VR903	636 031 0162	VR 22K OHM
VR904	636 031 0254	VR 47K OHM
VR906	636 031 0162	VR 22K OHM
VR907	636 031 0162	VR 22K OHM
VR909	636 031 0254	VR 47K OHM
VR911	636 031 0254	VR 47K OHM
VR912	636 031 0254	VR 47K OHM
VR913	636 031 0254	VR 47K OHM
VR917	636 031 0254	VR 47K OHM
VR918	636 031 0162	VR 22K OHM
VR919	636 031 0254	VR 47K OHM
VR922	636 031 0063	VR 10K OHM
X9101	636 031 8991	CRISTAL UNIT,28.3750MHZ
X9102	636 031 9004	CRISTAL UNIT,17.734476MHZ

COMPL,CA-2

COMPL.NO.	636 031 8625	
C9203	403 203 1506	TA-SOLID 3.3U M 16V
C9204	403 155 1807	CERAMIC 0.01U K 25V
C9205	403 202 8704	TA-SOLID 1U M 20V
C9206	403 202 8902	TA-SOLID 3.3U M 20V
C9207	403 203 1407	TA-SOLID 1U M 16V
C9208	403 203 0608	TA-SOLID 22U M 6.3V
D9411	407 109 4609	DIODE MA728-(TX)
Q9201	405 045 8200	TR 2SK443-6
R9201	401 113 5409	MT-GLAZE 510 JA 1/16W
R9202	401 105 2201	MT-GLAZE 180K JA 1/16W
R9203	401 105 3406	MT-GLAZE 27K JA 1/16W
R9204	401 105 6506	MT-GLAZE 680 JA 1/16W
R9205	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R9206	401 105 0405	MT-GLAZE 100 JA 1/16W
R9207	401 105 2904	MT-GLAZE 22K JA 1/16W
R9208	401 105 7503	MT-GLAZE 82K JA 1/16W

COMPL,CA-3

COMPL.NO.	636 031 8656	
A9301 ⚠	636 031 9011	UNIT,DC-DC CONVERTOR
OR ⚠	636 032 3407	UNIT,DC-DC CONVERTOR
C9301	403 199 3102	ELECT 1000U M 10V

COMPL,TC-1

COMPL.NO.	636 031 8632	
C9401	403 202 8508	TA-SOLID 4.7U M 16V
C9402	403 176 0209	CERAMIC 0.1U Z 25V
C9405	403 157 6602	CERAMIC 470P K 50V
C9406	403 155 1807	CERAMIC 0.01U K 25V
C9407	403 169 2807	CERAMIC 330P J 50V
C9408	403 157 2505	CERAMIC 27P J 50V

LOCATION	PARTS NO.	DESCRIPTION
C9409	403 157 2505	CERAMIC 27P J 50V
C9410	403 113 3805	CERAMIC 1000P K 50V
C9411	403 113 3805	CERAMIC 1000P K 50V
C9412	403 153 1205	ELECT 47U M 16V
C9413	403 202 6908	TA-SOLID 3.3U M 6.3V
C9414	403 203 1001	TA-SOLID 4.7U M 10V
C9415	403 176 0209	CERAMIC 0.1U Z 25V
C9416	403 176 0209	CERAMIC 0.1U Z 25V
C9417	403 176 0209	CERAMIC 0.1U Z 25V
C9418	403 176 0209	CERAMIC 0.1U Z 25V
C9419	403 202 6908	TA-SOLID 3.3U M 6.3V
C9420	403 202 6908	TA-SOLID 3.3U M 6.3V
C9422	403 176 0209	CERAMIC 0.1U Z 25V
C9423	403 176 0209	CERAMIC 0.1U Z 25V
C9424	403 203 0004	TA-SOLID 10U M 4V
C9425	403 113 3805	CERAMIC 1000P K 50V
C9426	403 113 3805	CERAMIC 1000P K 50V
C9427	403 202 6304	TA-SOLID 4.7U M 4V
C9431	403 152 9707	ELECT 22U M 6.3V
C9432	403 176 0209	CERAMIC 0.1U Z 25V
C9433	403 152 9707	ELECT 22U M 6.3V
C9434	403 176 0209	CERAMIC 0.1U Z 25V
C9435	403 152 9707	ELECT 22U M 6.3V
C9436	403 176 0209	CERAMIC 0.1U Z 25V
C9440	403 155 1807	CERAMIC 0.01U K 25V
C9441	403 202 6908	TA-SOLID 3.3U M 6.3V
C9442	403 176 0209	CERAMIC 0.1U Z 25V
C9443	403 176 0209	CERAMIC 0.1U Z 25V
C9444	403 203 2404	TA-SOLID 0.47U M 25V
C9445	403 203 2404	TA-SOLID 0.47U M 25V
C9446	403 203 2404	TA-SOLID 0.47U M 25V
C9447	403 176 0209	CERAMIC 0.1U Z 25V
C9448	403 176 0209	CERAMIC 0.1U Z 25V
D9401	407 134 7200	DIODE MA141K-TX
D9402	407 134 7200	DIODE MA141K-TX
D9403	407 134 7200	DIODE MA141K-TX
D9404	407 071 8407	ZENER DIODE DZD8.2X
D9405	407 071 8407	ZENER DIODE DZD8.2X
D9406	407 134 7408	DIODE MA141WK-TX
D9407	407 134 7309	DIODE MA141WA-TX
D9408	407 134 7200	DIODE MA141K-TX
D9409	407 134 7200	DIODE MA141K-TX
D9410	407 130 2605	DIODE MA143A-TX
F9401 ⚠	404 040 5504	CERAMIC 470P M 100V
F9402 ⚠	404 040 5504	CERAMIC 470P M 100V
F9403 ⚠	404 040 5504	CERAMIC 470P M 100V
IC941	409 212 7409	IC LC97000A-376
IC942	410 111 7803	IC S83C51FA-1/R6300
IC943	409 215 6706	IC LB1830M-T1
IC944	409 180 1300	IC SC14S69FEL
IC945	409 155 4305	IC BU4066BF-T1
L9401	636 027 8585	COIL,INDUCTOR 10UH
L9402	636 027 8585	COIL,INDUCTOR 10UH
L9403	636 027 8585	COIL,INDUCTOR 10UH
L9404	636 027 8585	COIL,INDUCTOR 10UH
Q9401	405 102 5609	TR 2SD1819A-R-TX
Q9402	405 093 8900	TR XN6501-TW
Q9403	405 102 5609	TR 2SD1819A-R-TX
Q9404	405 102 5203	TR UN5212-TX
Q9405	405 102 5609	TR 2SD1819A-R-TX
Q9406	405 102 5203	TR UN5212-TX
Q9407	405 061 4101	TR 2SA1434
Q9408	405 102 5609	TR 2SD1819A-R-TX
Q9409	405 102 5500	TR 2SB1218A-R-TX

LOCATION	PARTS NO.	DESCRIPTION
Q9411	405 102 5203	TR UN5212-TX
Q9412	405 102 5203	TR UN5212-TX
Q9413	405 102 5609	TR 2SD1819A-R-TX
Q9414	405 082 9000	TR IMZ2-T99
Q9415	405 102 5609	TR 2SD1819A-R-TX
Q9416	405 102 5609	TR 2SD1819A-R-TX
R9401	401 105 0504	MT-GLAZE 1K JA 1/16W
R9402	401 105 3406	MT-GLAZE 27K JA 1/16W
R9403	401 105 4007	MT-GLAZE 330 JA 1/16W
R9404	401 105 0504	MT-GLAZE 1K JA 1/16W
R9405	401 105 3208	MT-GLAZE 270 JA 1/16W
R9406	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R9407	401 105 0504	MT-GLAZE 1K JA 1/16W
R9408	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R9409	401 113 6406	MT-GLAZE 5.1K JA 1/16W
R9410	401 105 0603	MT-GLAZE 10K JA 1/16W
R9411	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R9412	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R9413	401 105 0603	MT-GLAZE 10K JA 1/16W
R9414	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R9415	401 113 6406	MT-GLAZE 5.1K JA 1/16W
R9416	401 105 0306	MT-GLAZE 10 JA 1/16W
R9417	401 105 2102	MT-GLAZE 18K JA 1/16W
R9418	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R9419	401 105 0603	MT-GLAZE 10K JA 1/16W
R9420	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R9421	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R9423	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R9425	401 105 0603	MT-GLAZE 10K JA 1/16W
R9426	401 105 0603	MT-GLAZE 10K JA 1/16W
R9427	401 105 2904	MT-GLAZE 22K JA 1/16W
R9428	401 105 2904	MT-GLAZE 22K JA 1/16W
R9429	401 105 2904	MT-GLAZE 22K JA 1/16W
R9431	401 105 5400	MT-GLAZE 47K JA 1/16W
R9432	401 105 4205	MT-GLAZE 33K JA 1/16W
R9433	401 105 5509	MT-GLAZE 470K JA 1/16W
R9434	401 105 3000	MT-GLAZE 220K JA 1/16W
R9435	401 105 2201	MT-GLAZE 180K JA 1/16W
R9436	401 105 2201	MT-GLAZE 180K JA 1/16W
R9437	401 105 3505	MT-GLAZE 270K JA 1/16W
R9438	401 105 4700	MT-GLAZE 39K JA 1/16W
R9439	401 105 1709	MT-GLAZE 150K JA 1/16W
R9440	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9441	401 105 0702	MT-GLAZE 100K JA 1/16W
R9442	401 105 8104	MT-GLAZE 56K JA 1/16W
R9443	401 105 5400	MT-GLAZE 47K JA 1/16W
R9444	401 105 3406	MT-GLAZE 27K JA 1/16W
R9450	401 105 2904	MT-GLAZE 22K JA 1/16W
R9451	401 113 3207	MT-GLAZE 4.7 KA 1/16W
R9452	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R9453	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R9454	401 105 3000	MT-GLAZE 220K JA 1/16W
R9455	401 105 2904	MT-GLAZE 22K JA 1/16W
R9456	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R9457	401 105 0504	MT-GLAZE 1K JA 1/16W
R9458	401 105 0603	MT-GLAZE 10K JA 1/16W
R9459	401 105 4106	MT-GLAZE 3.3K JA 1/16W
R9461	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R9462	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R9463	401 105 0504	MT-GLAZE 1K JA 1/16W
R9464	401 105 2904	MT-GLAZE 22K JA 1/16W
R9465	401 105 8203	MT-GLAZE 68K JA 1/16W
R9467	401 105 0702	MT-GLAZE 100K JA 1/16W
R9468	401 105 7503	MT-GLAZE 82K JA 1/16W
R9469	401 105 1600	MT-GLAZE 15K JA 1/16W
R9470	401 105 0603	MT-GLAZE 10K JA 1/16W
R9471	401 105 2102	MT-GLAZE 18K JA 1/16W
R9472	401 105 0603	MT-GLAZE 10K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R9477	401 105 5400	MT-GLAZE 47K JA 1/16W
R9481	401 105 0603	MT-GLAZE 10K JA 1/16W
R9482	401 105 0603	MT-GLAZE 10K JA 1/16W
R9483	401 105 0504	MT-GLAZE 1K JA 1/16W
R9484	401 105 0504	MT-GLAZE 1K JA 1/16W
R9486	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R9487	401 105 6605	MT-GLAZE 6.8K JA 1/16W
R9488	401 038 5300	MT-GLAZE 39K JA 1/10W
R9489	401 038 7809	MT-GLAZE 56K JA 1/10W
R9491	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9492	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9493	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9494	401 105 2102	MT-GLAZE 18K JA 1/16W
R9495	401 105 3406	MT-GLAZE 27K JA 1/16W
R9496	401 105 0504	MT-GLAZE 1K JA 1/16W
R9497	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R9498	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R9499	401 105 3307	MT-GLAZE 2.7K JA 1/16W
T9401	636 003 4600	HF COIL TRANS
VR945	636 031 0254	VR 47K OHM
VR947	636 031 0070	VR 100K OHM
VR948	636 031 0070	VR 100K OHM
COMPL,TC-2		
COMPL.NO.	636 031 8649	
C9501	403 202 6908	TA-SOLID 3.3U M 6.3V
C9502	403 176 0209	CERAMIC 0.1U Z 25V
C9503	403 176 0209	CERAMIC 0.1U Z 25V
C9504	403 202 6908	TA-SOLID 3.3U M 6.3V
C9505	403 176 0209	CERAMIC 0.1U Z 25V
C9506	403 202 6304	TA-SOLID 4.7U M 4V
C9507	403 176 2302	CERAMIC 0.033U Z 25V
C9508	403 155 2101	CERAMIC 1500P K 50V
C9509	403 157 7302	CERAMIC 6800P K 50V
C9510	403 176 2302	CERAMIC 0.033U Z 25V
C9511	403 157 7302	CERAMIC 6800P K 50V
C9512	403 155 2101	CERAMIC 1500P K 50V
C9514	403 153 1205	ELECT 47U M 16V
C9515	403 203 1407	TA-SOLID 1U M 16V
C9516	403 203 1407	TA-SOLID 1U M 16V
IC951	409 167 7103	IC NJM2107F-TE1
IC952	409 167 7103	IC NJM2107F-TE1
IC953	409 168 9106	IC BA10358F-T1
IC954	409 111 6008	IC BA225AF-T1
IC955	409 168 9106	IC BA10358F-T1
IC956	409 215 6706	IC LB1830M-T1
Q9501	405 102 5500	TR 2SB1218A-R-TX
Q9502	405 087 4604	TR FC102-TL
R9501	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9502	401 105 0603	MT-GLAZE 10K JA 1/16W
R9503	401 105 0603	MT-GLAZE 10K JA 1/16W
R9506	401 105 6704	MT-GLAZE 680K JA 1/16W
R9507	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9511	401 105 7404	MT-GLAZE 8.2K JA 1/16W
R9512	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R9513	401 105 7503	MT-GLAZE 82K JA 1/16W
R9514	401 105 1600	MT-GLAZE 15K JA 1/16W
R9515	401 105 1600	MT-GLAZE 15K JA 1/16W
R9516	401 105 5509	MT-GLAZE 470K JA 1/16W
R9517	401 105 0702	MT-GLAZE 100K JA 1/16W
R9518	401 105 7602	MT-GLAZE 820K JA 1/16W
R9519	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R9521	401 105 4304	MT-GLAZE 330K JA 1/16W
R9522	401 105 4304	MT-GLAZE 330K JA 1/16W
R9523	401 105 5509	MT-GLAZE 470K JA 1/16W
R9524	401 105 0702	MT-GLAZE 100K JA 1/16W
R9525	401 105 7602	MT-GLAZE 820K JA 1/16W
R9526	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R9527	401 105 7909	MT-GLAZE 0 ZA 1/16W
R9528	401 105 0306	MT-GLAZE 10 JA 1/16W
COMPL,VF-1		
COMPL.NO.	636 032 0956	
C01	403 163 7907	ELECT 47U M 6.3V
C03	403 091 0407	TA-SOLID 1U M 16V
OR	403 091 0209	TA-SOLID 1U M 16V
C04	403 073 1200	CERAMIC 0.033U K 50V
C05	403 090 6509	TA-SOLID 33U M 10V
C06	403 188 4301	CERAMIC 0.22U M 16V
C07	403 205 8305	MT-COMPO 0.1U J 25V
C08	403 026 2902	CERAMIC 47P J 50V
C09	403 067 9809	CERAMIC 0.1U K 25V
C11	403 067 9809	CERAMIC 0.1U K 25V
C12	403 188 4400	CERAMIC 1800P K 100V
C13	403 159 8109	ELECT 100U M 6.3V
C14 ⚠	403 076 9302	CERAMIC 2200P Z 1K
OR ⚠	403 199 2105	CERAMIC 2200P Z 1K
C15 ⚠	403 076 9302	CERAMIC 2200P Z 1K
OR ⚠	403 199 2105	CERAMIC 2200P Z 1K
C16	403 167 6203	CERAMIC 0.022U K 100V
C17	403 167 6906	ELECT 10U M 50V
C18	403 028 9909	CERAMIC 560P J 50V
C19	403 204 4803	ELECT 100U M 10V
C20	403 071 8102	CERAMIC 2200P K 50V
D01	407 069 4909	DIODE DSB010
D02 ⚠	407 066 8207	DIODE SB02-09CP
D03 ⚠	407 124 9009	DIODE ERA34-10
IC1	409 174 0708	IC AN2512S-(T1)
L01 ⚠	636 031 4962	COIL,INDUCTOR 100UH
L02	636 031 4979	COIL,LINEARYTY
L03 ⚠	636 031 4955	COIL,INDUCTOR 68UH
Q01 ⚠	405 080 1907	TR 2SD1615-T1-GK
Q02	405 043 8905	TR 2SA1257-G5
R01	401 037 5707	MT-GLAZE 100K JA 1/10W
R02	401 037 5806	MT-GLAZE 1M JA 1/10W
R03	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R04	401 038 1807	MT-GLAZE 27 JA 1/10W
R05	401 037 5103	MT-GLAZE 10 JA 1/10W
R07	401 038 6000	MT-GLAZE 43K JA 1/10W
R08	401 090 2002	MT-GLAZE 3.9 JA 1/10W
R11	401 037 5004	MT-GLAZE 0 ZA 1/10W
R12	401 037 5004	MT-GLAZE 0 ZA 1/10W
R13	401 037 5004	MT-GLAZE 0 ZA 1/10W
R14	401 037 5004	MT-GLAZE 0 ZA 1/10W
R17	401 037 5806	MT-GLAZE 1M JA 1/10W
R18	401 037 5806	MT-GLAZE 1M JA 1/10W
R19	401 037 5806	MT-GLAZE 1M JA 1/10W
R20 ⚠	401 037 6902	MT-GLAZE 120K JA 1/10W
R21	401 037 8203	MT-GLAZE 1.5M JA 1/10W
R24	401 038 9308	MT-GLAZE 68K JA 1/10W
R25	401 038 3405	MT-GLAZE 33 JA 1/10W
R26	401 038 3900	MT-GLAZE 3.3M JA 1/10W
R27	401 038 3504	MT-GLAZE 330 JA 1/10W
R28	401 089 2907	MT-GLAZE 4.7K GA 1/10W
R29	401 157 8008	MT-GLAZE 18K GA 1/10W
R30	401 037 6704	MT-GLAZE 1.2K JA 1/10W

LOCATION		PARTS NO.	DESCRIPTION
R31		401 037 5202	MT-GLAZE 100 JA 1/10W
T01	⚠	636 031 4986	TRANS,FLYBACK
TH1		407 015 0405	THERMISTOR SDT-35-CTV
VR1		636 031 5013	VR,SEMI 47K OHM
VR2		636 031 4993	VR,SEMI 220 OHM
VR4		636 031 5006	VR,SEMI 2.2M OHM
VR5		636 031 5020	VR,SEMI 470K OHM

SCHEMATIC DIAGRAM
&
PRINTED WIRING BOARD

VM-ES88P (SANYO)
FVC-P880 (FISHER)

CONTENTS

OVERALL WIRING Ⓐ

P.C.B. CA-1 Ⓑ

P.C.B. CA-2
P.C.B. CA-3 Ⓒ

P.C.B. SY-1
P.C.B. SY-2 Ⓓ

P.C.B. AD-1
P.C.B. AD-2 Ⓔ

P.C.B. VD-1 Ⓕ

P.C.B. VD-1 (VIDEO) Ⓖ

P.C.B. VD-1 (SERVO) Ⓗ

P.C.B. VD-2 Ⓘ

P.C.B. TC-1 Ⓙ

P.C.B. TC-2 Ⓚ

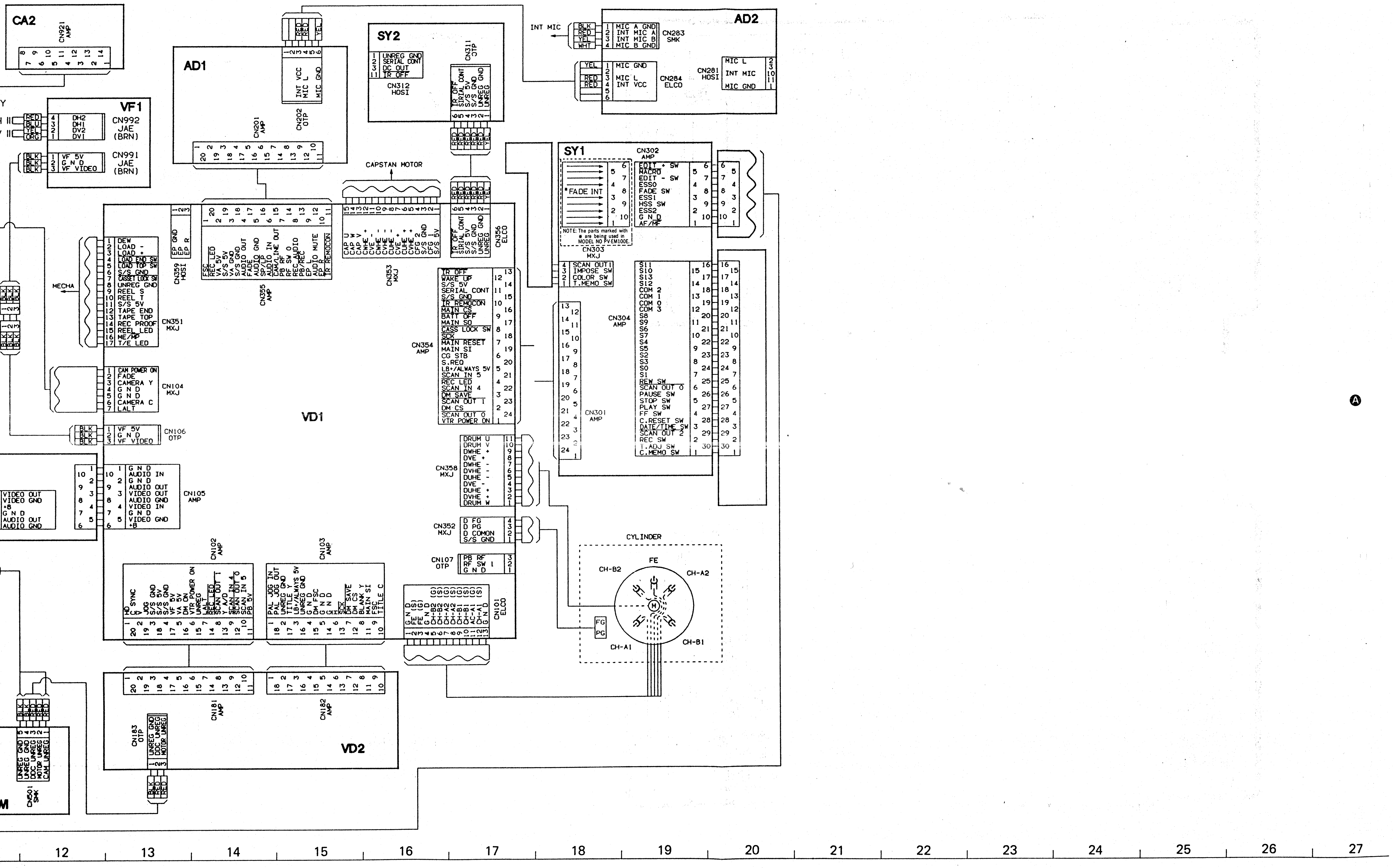
P.C.B. VF-1 Ⓛ

- —— : +B bus.
- Voltage values: Relative to ground, measured with a DC digital multimeter
- The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.
- All resistors are in ohms.
- All capacitors are in μF (p: pF).
- All coils are in mH (μ: μH).
- Cautions

SIDE A :	The parts viewed from SIDE A pattern are shown. (The SIDE A pattern is red.)
SIDE B :	The parts viewed from SIDE B pattern are shown. (The SIDE B pattern is black.)

The inside two-layer patterns are not shown.

OVERALL WIRING


CA2
CN921 AMP
AD1
CN201 AMP
CN202 OTP
INT VCC
MIC L
MIC GND
SY2
UNREG GND
SERIAL CONT
DC OUT
IR OFF
CN312 HOSI
CN311 OTP
AD2
INT MIC
MIC A GND
INT MIC A
INT MIC B
MIC B GND
CN283 SMK
MIC GND
MIC L
INT VCC
CN284 ELCO
CN281 HOSI
MIC L
INT MIC
MIC GND
VF1
DH2
DH1
DV2
DV1
CN992 JAE (BRN)
VF 5V
G N D
VF VIDEO
CN991 JAE (BRN)
CAPSTAN MOTOR
SY1
CN302 AMP
FADE INT
NOTE: The parts marked with * are being used in MODEL NO PV-EM100E.
CN303 MXJ
EDIT + SW
MACRO
EDIT - SW
ESS0
FADE SW
ESS1
HSS SW
ESS2
G N D
AF/MF
SCAN OUT1
IMPOSE SW
COLOR SW
T.MEMO SW
CN304 AMP
CN301 AMP
S11
S10
S13
S12
COM 2
COM 1
COM 0
COM 3
S8
S9
S6
S7
S4
S5
S2
S3
S0
S1
REW SW
SCAN OUT 0
PAUSE SW
STOP SW
PLAY SW
FF SW
C.RESET SW
DATE/TIME SW
SCAN OUT 2
REC SW
T.ADJ SW
C.MEMO SW
VD1
MECHA
DEW
LOAD -
LOAD +
LOAD END SW
LOAD TOP SW
S/S GND
CASSET LOCK SW
UNREG GND
REEL S
REEL T
S/S 5V
TAPE END
TAPE TOP
REC PROOF
REEL LED
ME/MP
T/E LED
CN351 MXJ
CAM POWER ON
FADE
CAMERA Y
G N D
G N D
CAMERA C
LALT
CN104 MXJ
VF 5V
G N D
VF VIDEO
CN106 OTP
G N D
AUDIO IN
G N D
AUDIO OUT
VIDEO OUT
AUDIO GND
VIDEO IN
G N D
VIDEO GND
+B
CN105 AMP
VIDEO OUT
VIDEO GND
+B
G N D
AUDIO OUT
AUDIO GND
EP GND
EP L
EP R
CN359 HOSI
FSC
REC LED
VA 5V
S/S 5V
VA GND
S/S GND
AUDIO OUT
FADE
AUDIO GND
CAM/LINE OUT
AUDIO IN
SP/LP
REC SW 0
PB/REC
REC AUDIO
AUDIO MUTE
EP R
IR REMOCON
CN355 AMP
CAP U
CAP W
CAP V
CNHE +
CVHE -
CWHE -
CUHE -
CVHE +
CUHE +
CFG 2
CFG GND
S/S 5V
CN353 MXJ
IR OFF
SERIAL CONT
S/S 5V
S/S GND
UNREG GND
UNREG
CN356 ELCO
IR OFF
WAKE UP
S/S 5V
SERIAL CONT
S/S GND
IR REMOCON
MAIN CS
BATT OFF
MAIN SO
CASS LOCK SW
SCK
MAIN RESET
MAIN SI
CG STB
S.REQ
LB+/ALWAYS 5V
SCAN IN 5
REC LED
SCAN IN 4
DM SAVE
SCAN OUT 1
DM CS
SCAN OUT 0
VTR POWER ON
CN354 AMP
DRUM U
DRUM V
DWHE +
DVE +
DWHE -
DVHE -
DUHE -
DVE -
DUHE +
DVHE +
DRUM W
CN358 MXJ
D FG
D PG
D COMON
S/S GND
CN352 MXJ
PB RF
RF SW 1
G N D
CN107 OTP
CN102 AMP
HD
V SYNC
JOG
S/S GND
S/S 5V
S/S GND
VF 5V
VA 5V
DM ON
VTR POWER ON
UNREG
LALT
REC LED
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Y A/D
SCAN IN 4
SCAN OUT 0
SCAN IN 5
PB 5V
CN103 AMP
PAL JOG IN
PAL JOG OUT
UNREG GND
TITLE Y
LB+/ALWAYS 5V
UNREG GND
G N D
DM FSC
G N D
G N D
SCK
DM SAVE
DM CS
BLANK Y
MAIN SI
FSC
TITLE C
G N D
FE (S)
FE (G)
G N D
CH-B2 (S)
CH-B2 (G)
CH-A2 (S)
CH-A2 (G)
CH-B1 (S)
CH-B1 (G)
AC-A1 (S)
CH-A1 (G)
CN101 ELCO
CYLINDER
FE
CH-B2
CH-A2
CH-A1
CH-B1
FG
PG
M
VD2
CN181 AMP
CN182 AMP
CN183 OTP
UNREG GND
DOC UNREG
MOTOR UNREG
UNREG GND
UNREG GND
DOC UNREG
MOTOR UNREG
CAM UNREG
CN501 SMK
BLK
RED
BLU
YEL
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WHT
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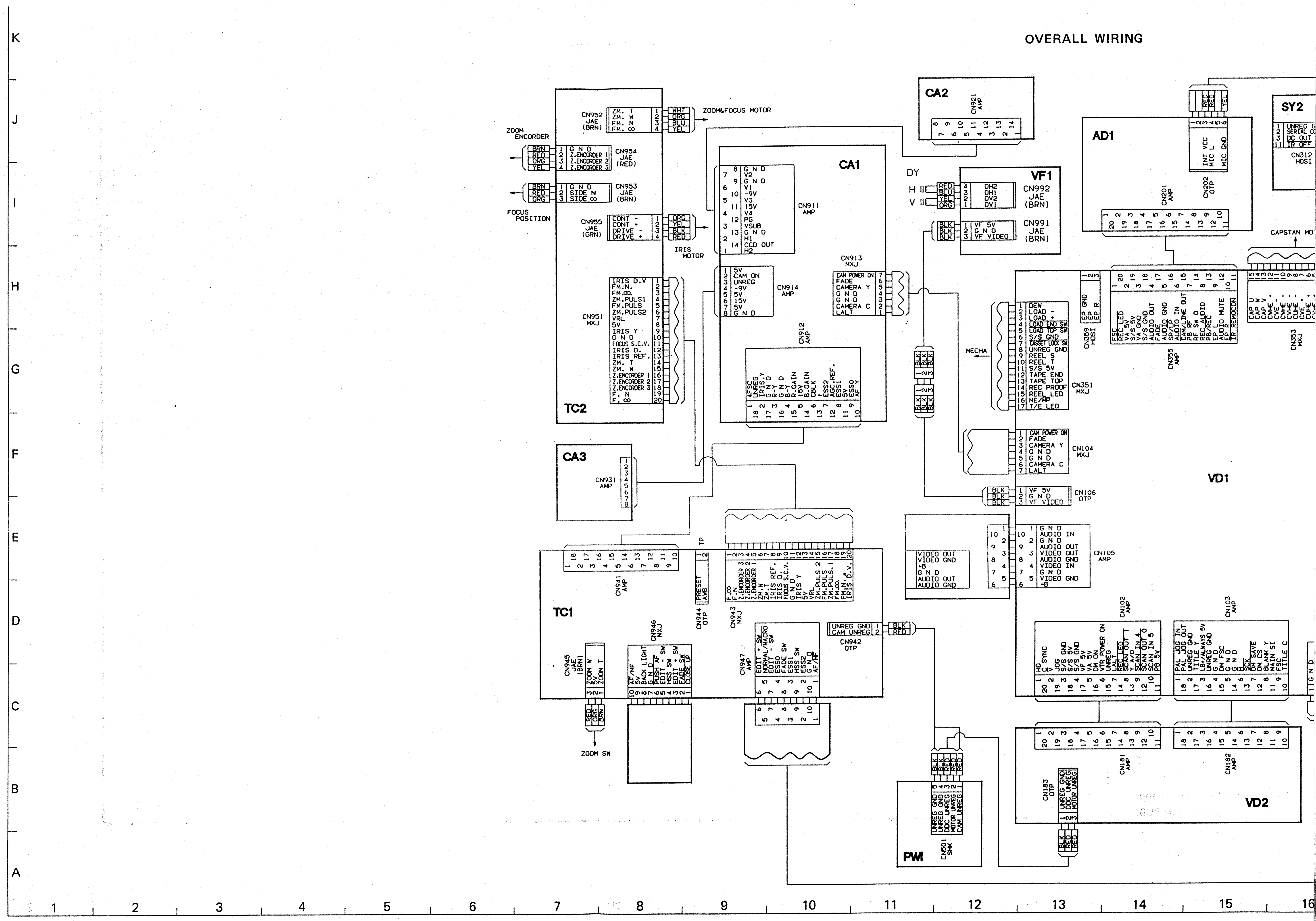
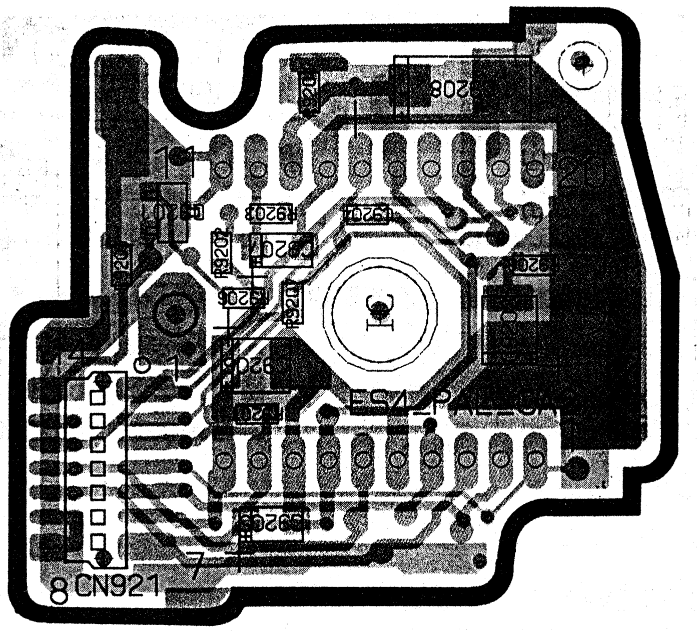
27

OVERALL WIRING

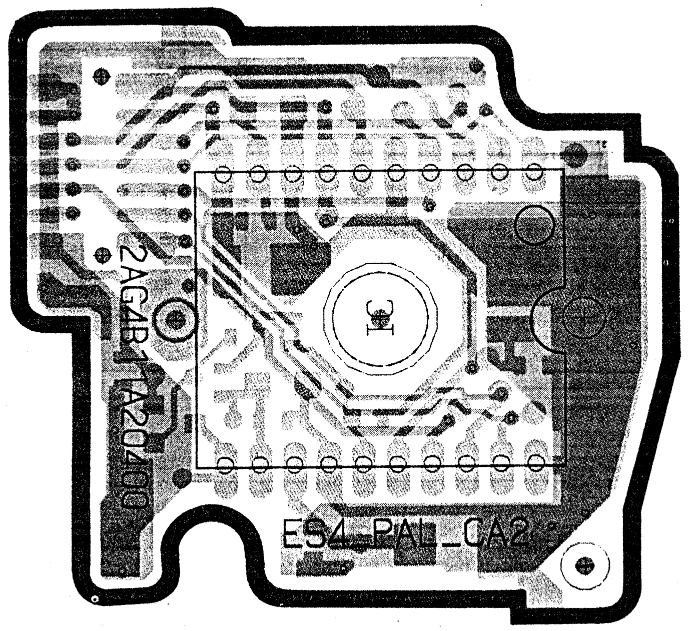

K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
TC2
CN952 JAE (BRN)
ZM. T
ZM. W
FM. N
FM. ∞
WHT
ORG
BLU
YEL
ZOOM&FOCUS MOTOR
ZOOM ENCORDER
CN954 JAE (RED)
G N D
Z.ENCORDER 1
Z.ENCORDER 2
Z.ENCORDER 3
BRN
RED
ORG
YEL
CN953 JAE (BRN)
SIDE N
SIDE ∞
FOCUS POSITION
CN955 JAE (GRN)
CONT -
CONT +
DRIVE -
DRIVE +
BLK
IRIS MOTOR
CN951 MXJ
IRIS D.V
FM.N.
FM.∞.
ZM.PULS1
FM.PULS
ZM.PULS2
VRL
5V
IRIS Y
FOCUS S.C.V.
IRIS D.
IRIS REF.
ZM. T
ZM. W
F. N
F. ∞
CA3
CN931 AMP
CA1
CN911 AMP
V2
V1
-9V
V3
15V
V4
PG
VSUB
H1
CCD OUT
H2
CN914 AMP
CAM ON
UNREG
CN913 MXJ
CAM POWER ON
FADE
CAMERA Y
CAMERA C
LALT
CN912 AMP
4FSC
UNREG
IRIS.Y
R-Y
B-Y
R.GAIN
B.GAIN
CBLK
ESS2
AGC.REF.
ESS1
ESSO
AF
CA2
CN921 AMP
DY
H
V
VF1
CN992 JAE (BRN)
DH2
DH1
DV2
DV1
CN991 JAE (BRN)
VF 5V
VF VIDEO
MECHA
CN351 MXJ
DEW
LOAD -
LOAD +
LOAD END SW
LOAD TOP SW
S/S GND
CASSET LOCK SW
UNREG GND
REEL S
REEL T
S/S 5V
TAPE END
TAPE TOP
REC PROOF
REEL LED
ME/MP
T/E LED
CN104 MXJ
CN106 OTP
CN105 AMP
AUDIO IN
AUDIO OUT
VIDEO OUT
AUDIO GND
VIDEO IN
VIDEO GND
+B
VIDEO OUT
VIDEO GND
AUDIO OUT
AUDIO GND
VD1
CN359 HOSI
EP GND
EP L
EP R
CN355 AMP
FSC
REC LED
VA 5V
VA GND
S/S 5V
S/S GND
AUDIO OUT
FADE
AUDIO GND
SP/LP
AUDIO IN
CAM/LINE OUT
PB RF
SW 0
REC AUDIO
PB/REC
AUDIO MUTE
IR REMOCON
CN353 MXJ
CAP U
CAP V
CAPSTAN MO
AD1
CN201 AMP
CN202 OTP
INT VCC
MIC L
MIC GND
SY2
UNREG G
SERIAL CO
DC OUT
IR OFF
CN312 HOSI
TC1
CN941 AMP
CN944 OTP
PRESET AMB
TP
CN943 MXJ
CN945 JAE (BRN)
ZOOM W
ZOOM T
ZOOM SW
CN946 MXJ
AF/MF
BACK LIGHT
PUSH AF
EDIT - SW
HSS SW
EDIT + SW
FADE SW
CLOSE UP
CN947 AMP
EDIT + SW
NORMAL/MACRO SW
EDIT -
ESSO
FADE SW
ESS1
HSS SW
ESS2
CN942 OTP
UNREG GND
CAM UNREG
PWI
CN501 SMK
UNREG GND
DDC UNREG
MOTOR UNREG
CAM UNREG
CN102 AMP
HD
C SYNC
JOG
JOG GND
VA 5V
DH ON
VTR POWER ON
LALT
REC LED
SCAN IN 4
SCAN OUT 0
SCAN IN 5
PB 5V
CN103 AMP
PAL JOG IN
PAL JOG OUT
UNREG GND
TITLE
LB/ALWAYS 5V
DH FSC
DH SAVE
DH CS
BLANK Y
MAIN SI
TITLE C
CN181 AMP
CN182 AMP
CN183 OTP
DDC UNREG
MOTOR UNREG
VD2

CA-2 BOARD SIDE A



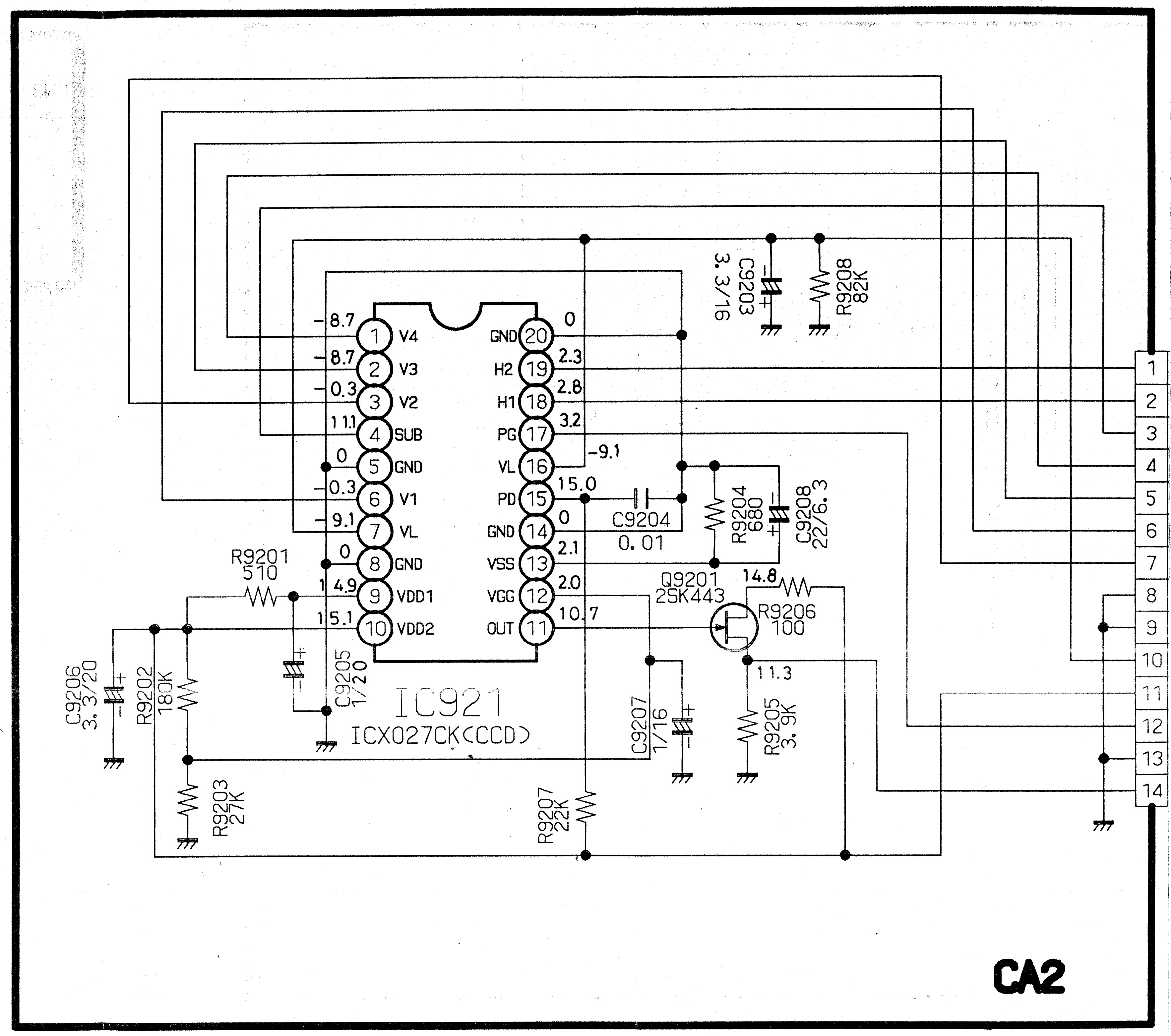
CN921
8
1
7
ES4-PAL-CA2

CA-2 BOARD SIDE B



2AC4B1A2040
ES4-PAL-CA2

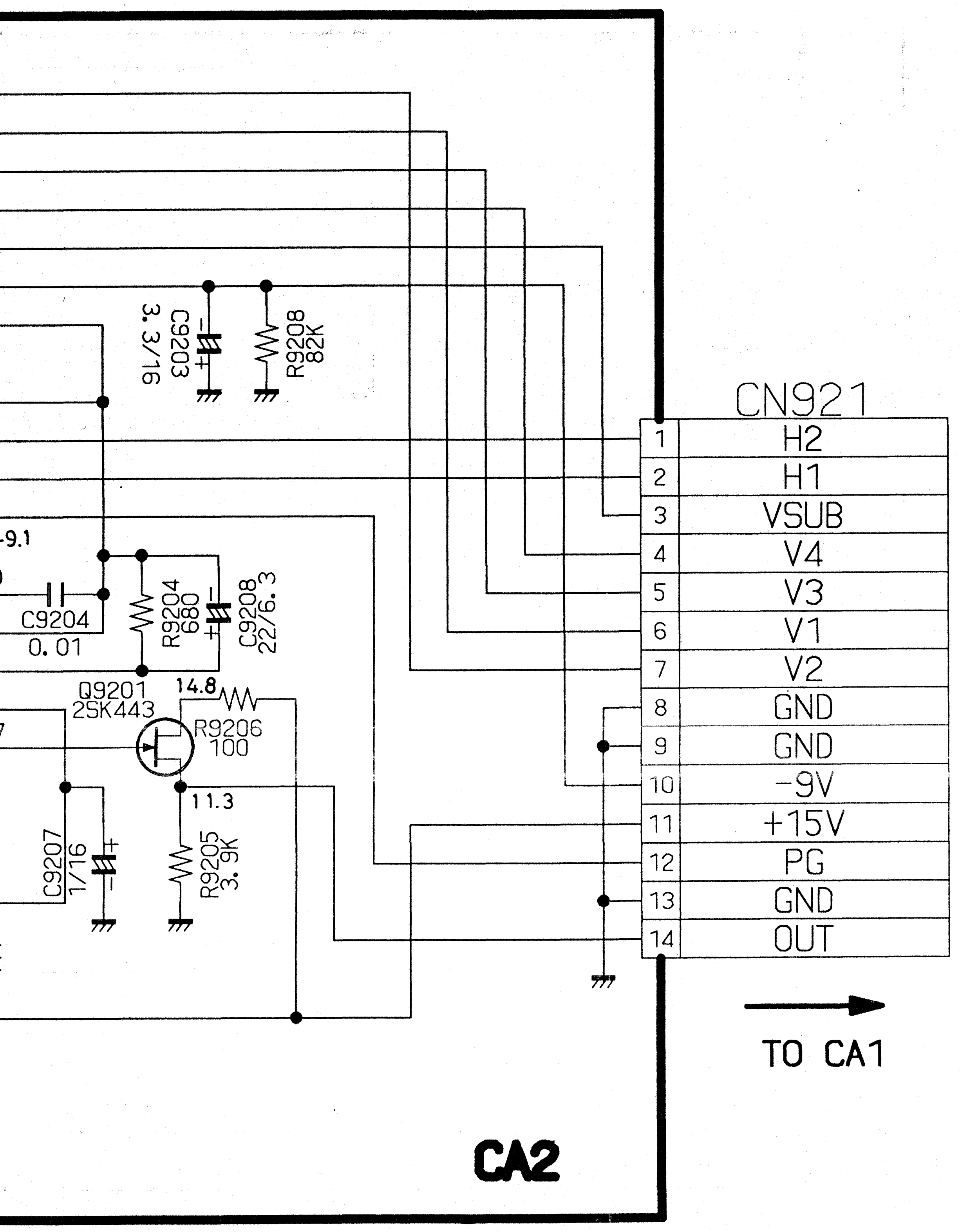
CA-2 CIRCUIT



IC921
ICX027CK(CCD)
1 V4 -8.7
2 V3 -8.7
3 V2 -0.3
4 SUB 11.1
5 GND 0
6 V1 -0.3
7 VL -9.1
8 GND 0
9 VDD1 14.9
10 VDD2 15.1
20 GND 0
19 H2 2.3
18 H1 2.8
17 PG 3.2
16 VL -9.1
15 PD 15.0
14 GND 0
13 VSS 2.1
12 VGG 2.0
11 OUT 10.7
R9201 510
R9202 180K
R9203 27K
R9204 680
R9205 3.9K
R9206 100
R9207 22K
R9208 82K
C9203 3.3/16
C9204 0.01
C9205 1/20
C9206 3.3/20
C9207 1/16
C9208 22/6.3
Q9201 2SK443
14.8
11.3
1
2
3
4
5
6
7
8
9
10
11
12
13
14
CA2

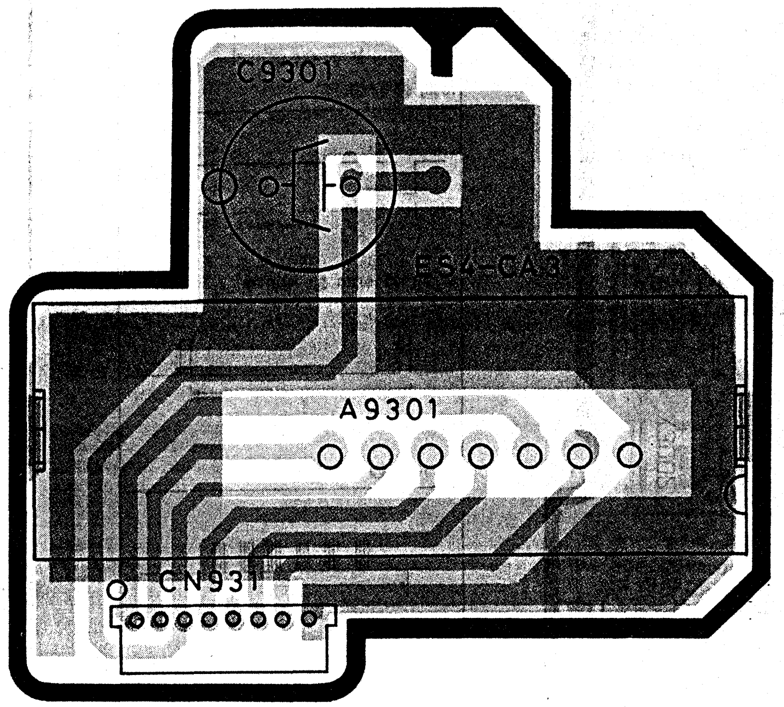
*a: REC MODE

CA-2 CIRCUIT

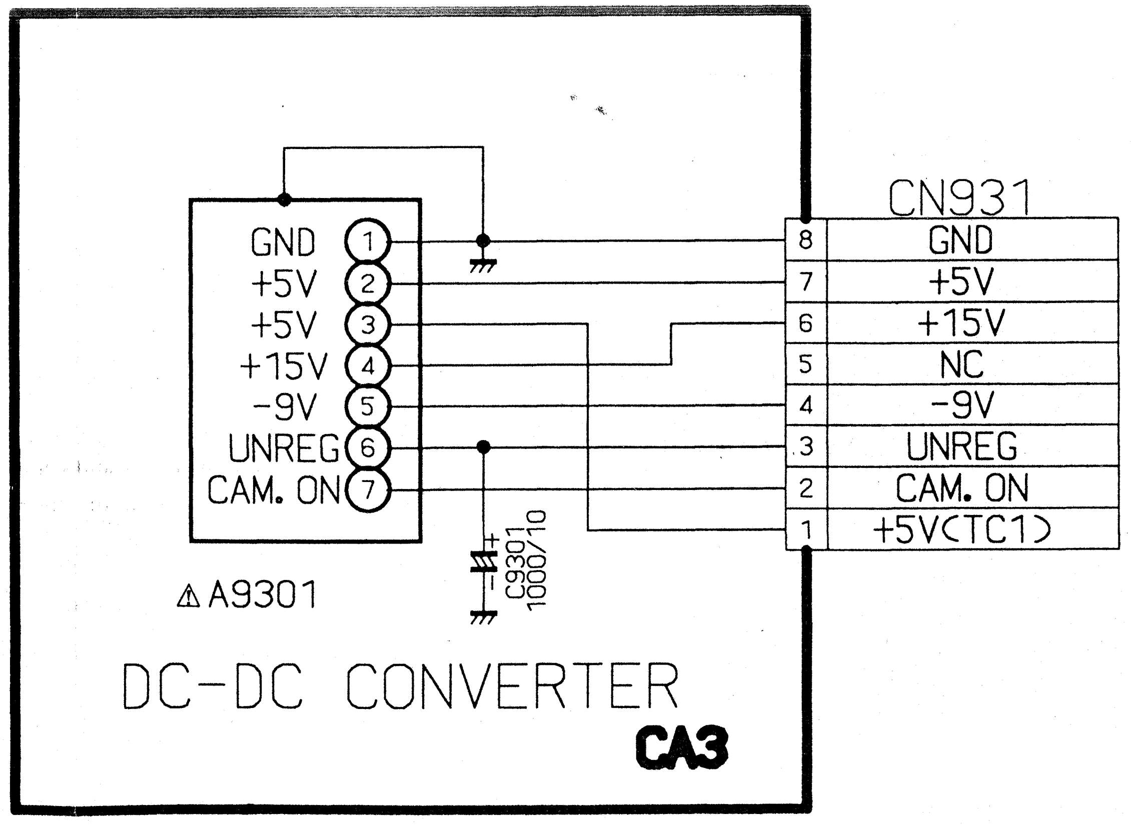

C9203
3.3/16
R9208
82K
CN921
1 H2
2 H1
3 VSUB
4 V4
5 V3
6 V1
7 V2
8 GND
9 GND
10 -9V
11 +15V
12 PG
13 GND
14 OUT
-9.1
C9204
0.01
R9204
680
C9208
22/6.3
Q9201
2SK443
14.8
R9206
100
11.3
C9207
1/16
R9205
3.9K
TO CA1
CA2

*a: REC MODE

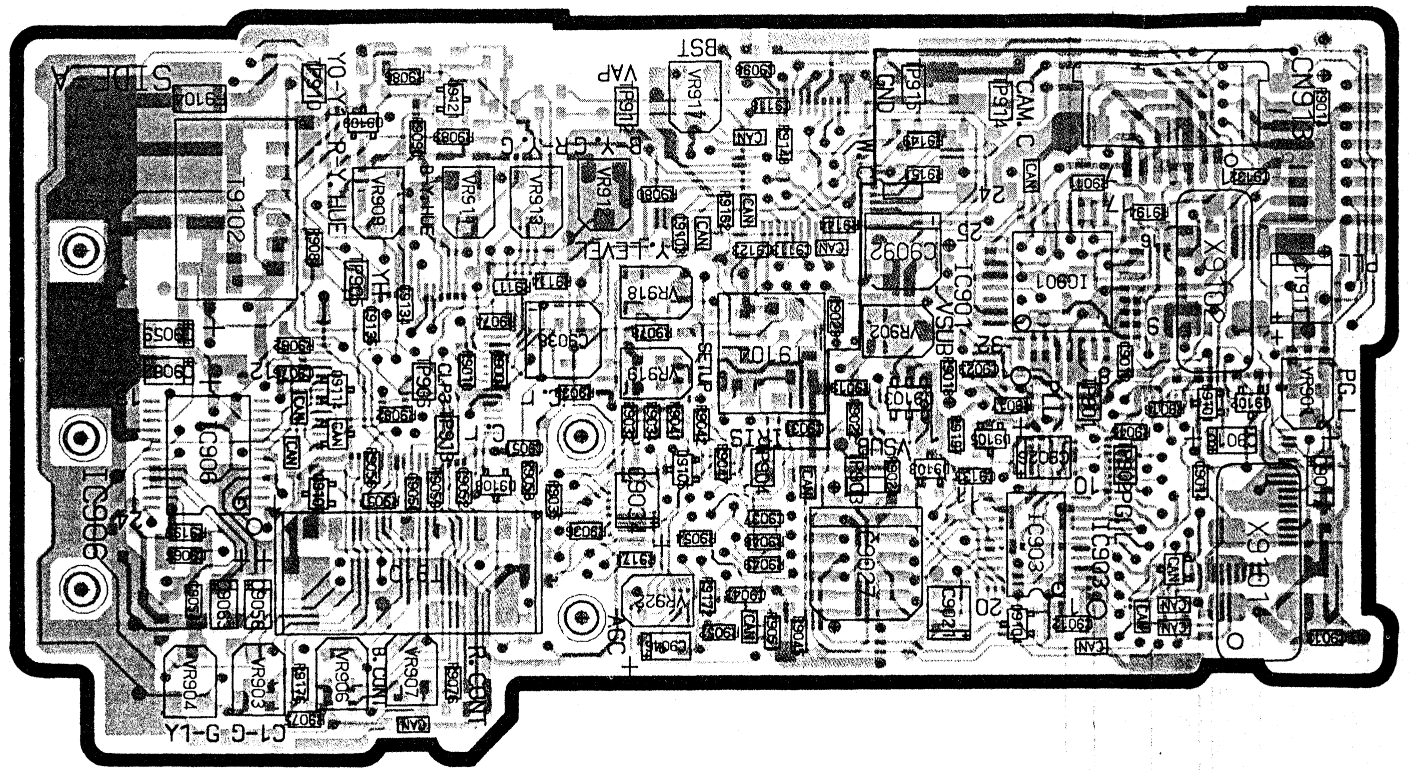
CA-3 BOARD SIDE A


C9301
A9301
CN931

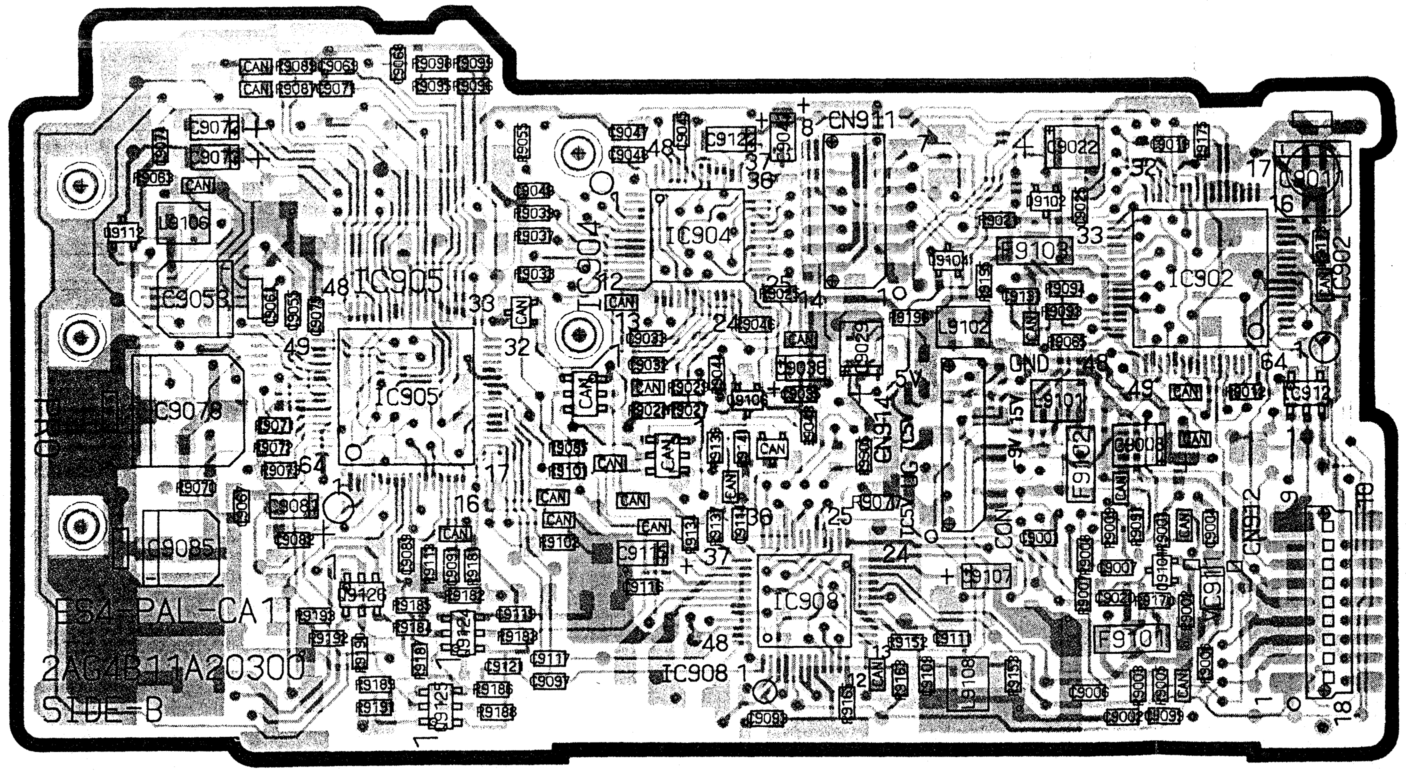
CA-3 CIRCUIT


GND 1
+5V 2
+5V 3
+15V 4
-9V 5
UNREG 6
CAM. ON 7
CN931
8 GND
7 +5V
6 +15V
5 NC
4 -9V
3 UNREG
2 CAM. ON
1 +5V(TC1)
C9301
1000/10
⚠A9301
DC-DC CONVERTER
CA3

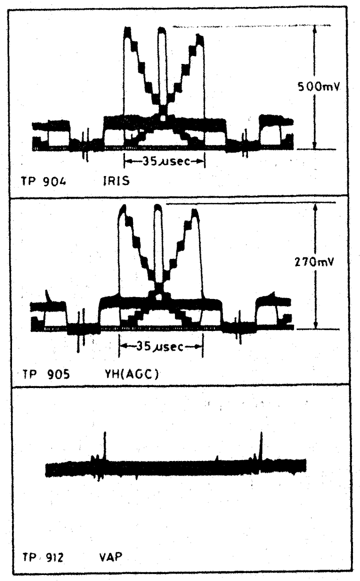
CA-1 BOARD SIDE A

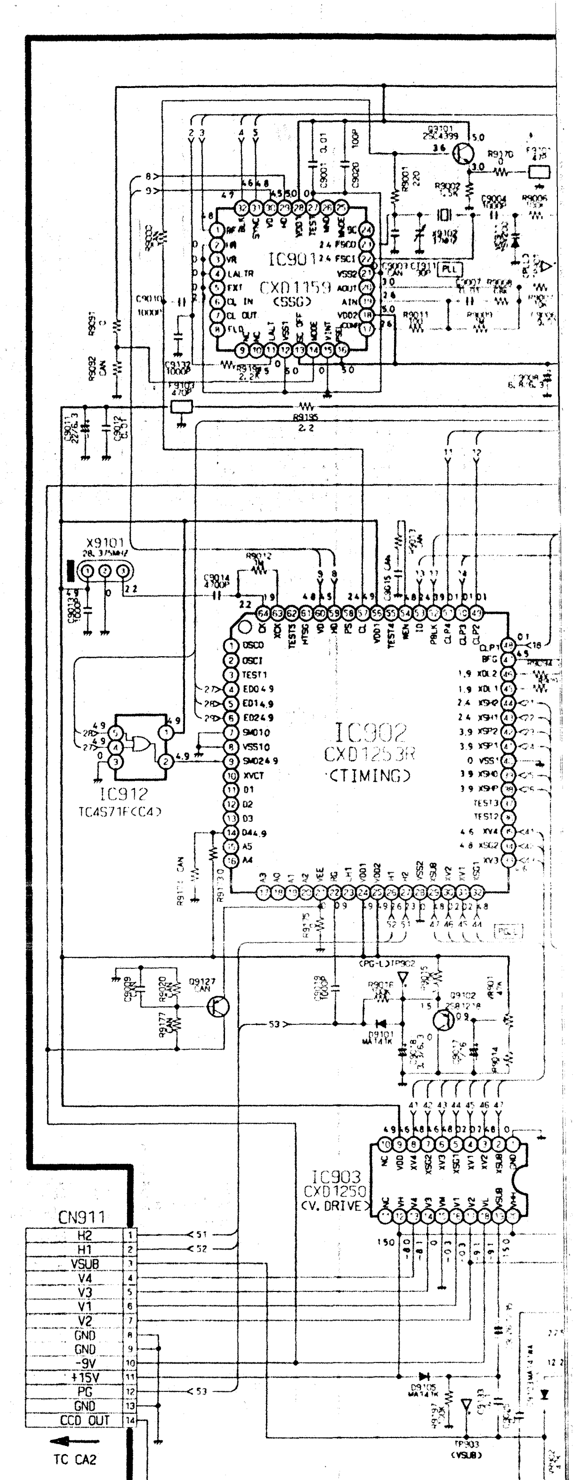


CA-1 BOARD SIDE B



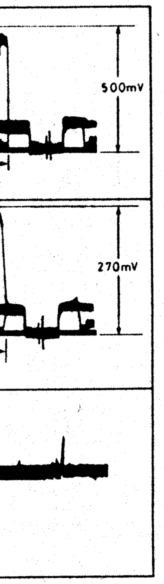
CA-1 BOARD (CAMERA)



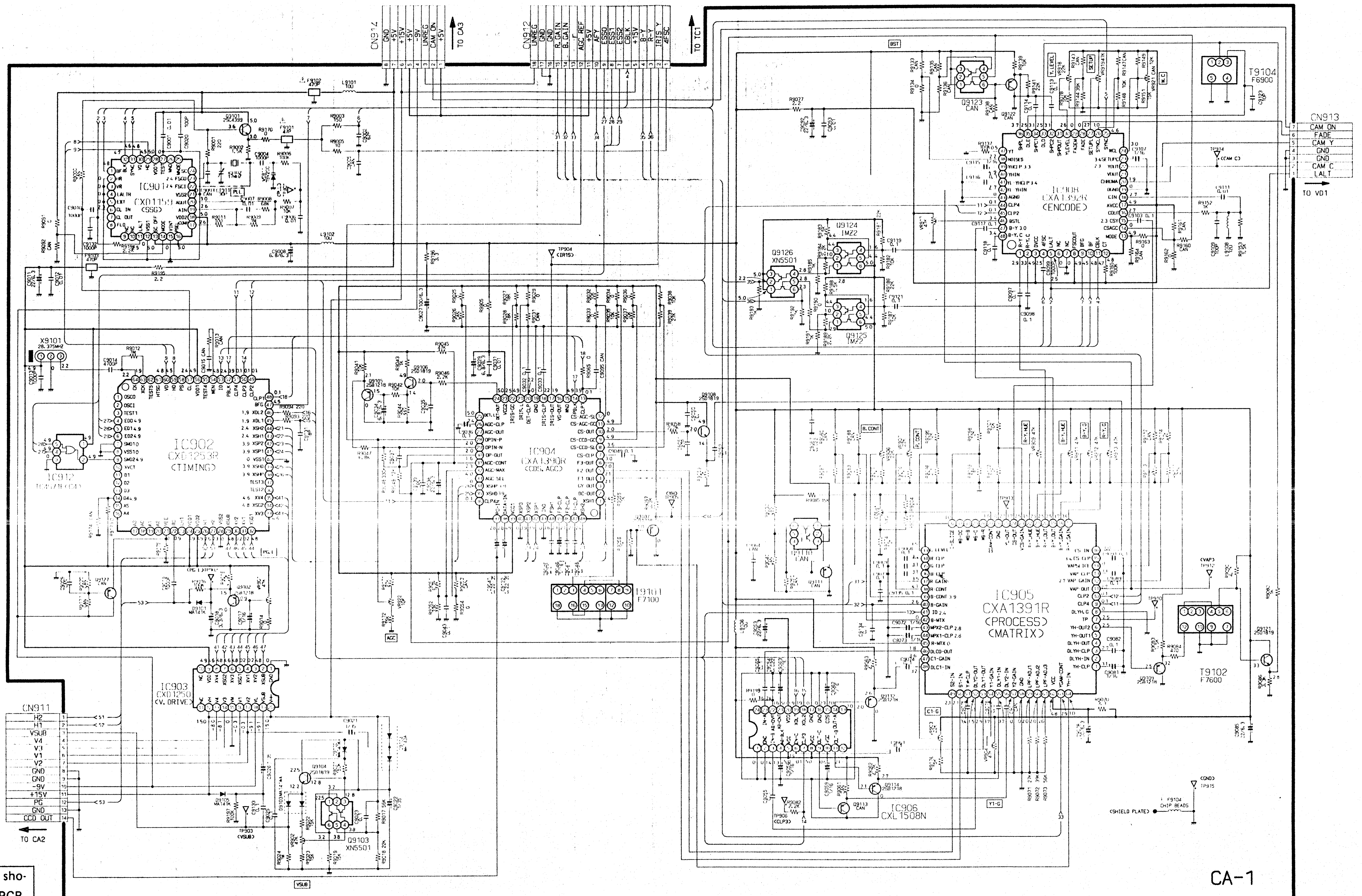

IC901
CXD1159
(SSG)
X9101
IC902
CXD1253R
(TIMING)
IC912
TC4S71F(C4)
IC903
CXD1250
(V. DRIVE)
CN911
H2
H1
VSUB
V4
V3
V1
V2
GND
GND
-9V
+15V
PG
GND
CCD OUT
TC CA2

Note: The resistors and capacitors whose location Nos. are not shown in the circuit diagram are not provided on the actual PCB.

(CAMERA)



CA-1 CIRCUIT

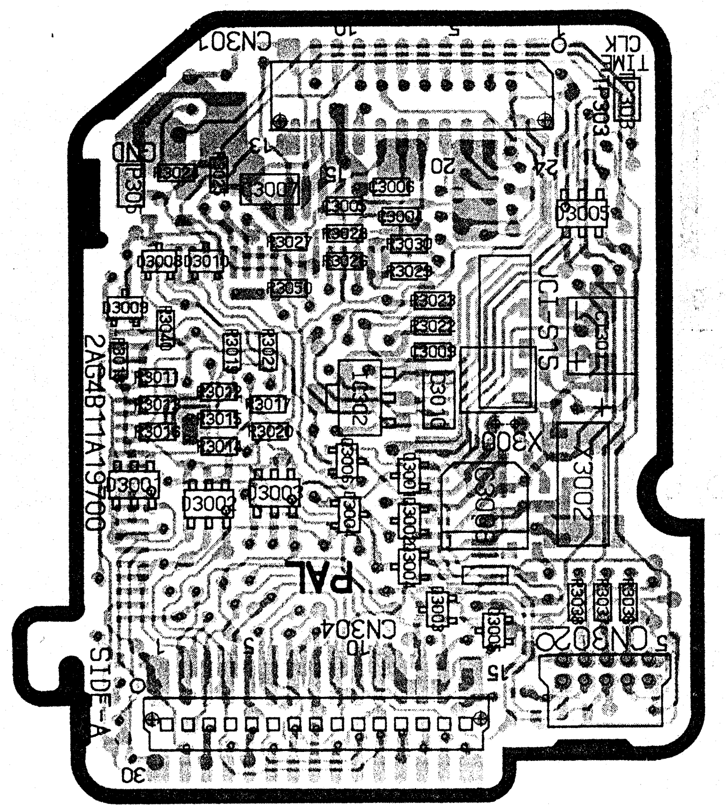

CN914
GND
+5V
+15V
+5V
-9V
UNREG
CAM ON
+5V
+5V
TO CA3
CN912
UNREG
GND
GND
R GAIN
B GAIN
AGC REF
+5V
AFV
ESS0
ESS1
ESS2
CBLK
+15V
B-Y
R-Y
IRIS Y
4FSC
TO TC1
BST
IC901
CXD1159
(SSG)
Q9101
2SC4399
Q9123
CAN
IC908
CXA1392R
(ENCODE)
T9104
F6900
CN913
CAM ON
FADE
CAM Y
GND
GND
CAM C
LALT
TO VD1
Q9124
IMZ2
Q9126
XN5501
Q9125
IMZ2
TP904
(IRIS)
X9101
28.375MHZ
IC902
CXD1253R
(TIMING)
IC912
IC904
CXA1390R
(CDS, AGC)
Q9108
2SD1819
IC905
CXA1391R
(PROCESS)
(MATRIX)
T9101
F7100
T9102
F7600
AGC
IC903
CXD1250
(V. DRIVE)
CN911
H2
H1
VSUB
V4
V3
V1
V2
GND
GND
-9V
+15V
PG
GND
CCD OUT
TO CA2
TP903
(VSUB)
Q9103
XN5501
VSUB
IC906
CXL1508N
TP906
(CLP3)
(GND)
TP915
F9104
CHIP BEADS
(SHIELD PLATE)
(VAP)
(CAM C)
CA-1

...citors whose location Nos. are not sho-
...am are not provided on the actual PCB.

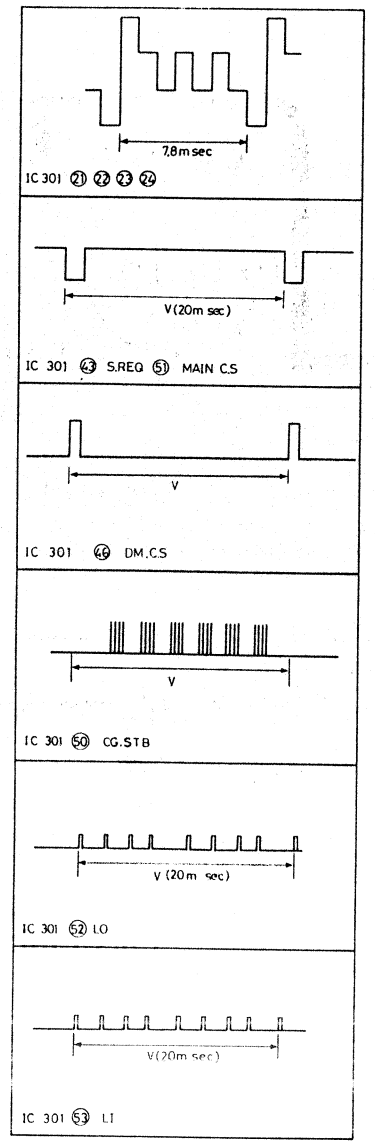
*a: REC MODE

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

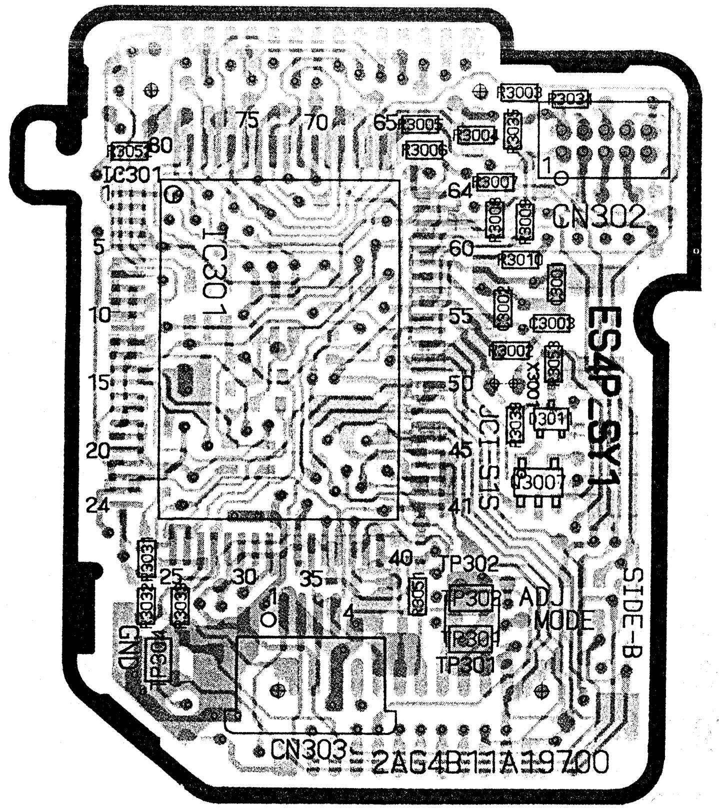
SY-1 BOARD SIDE A


CN301
CLK
TIME
TP303
GND
TP305
IC302
IC301
X3002
CN302
CN304
PAL
SIDE-A
2AG4B11A19700
20
30

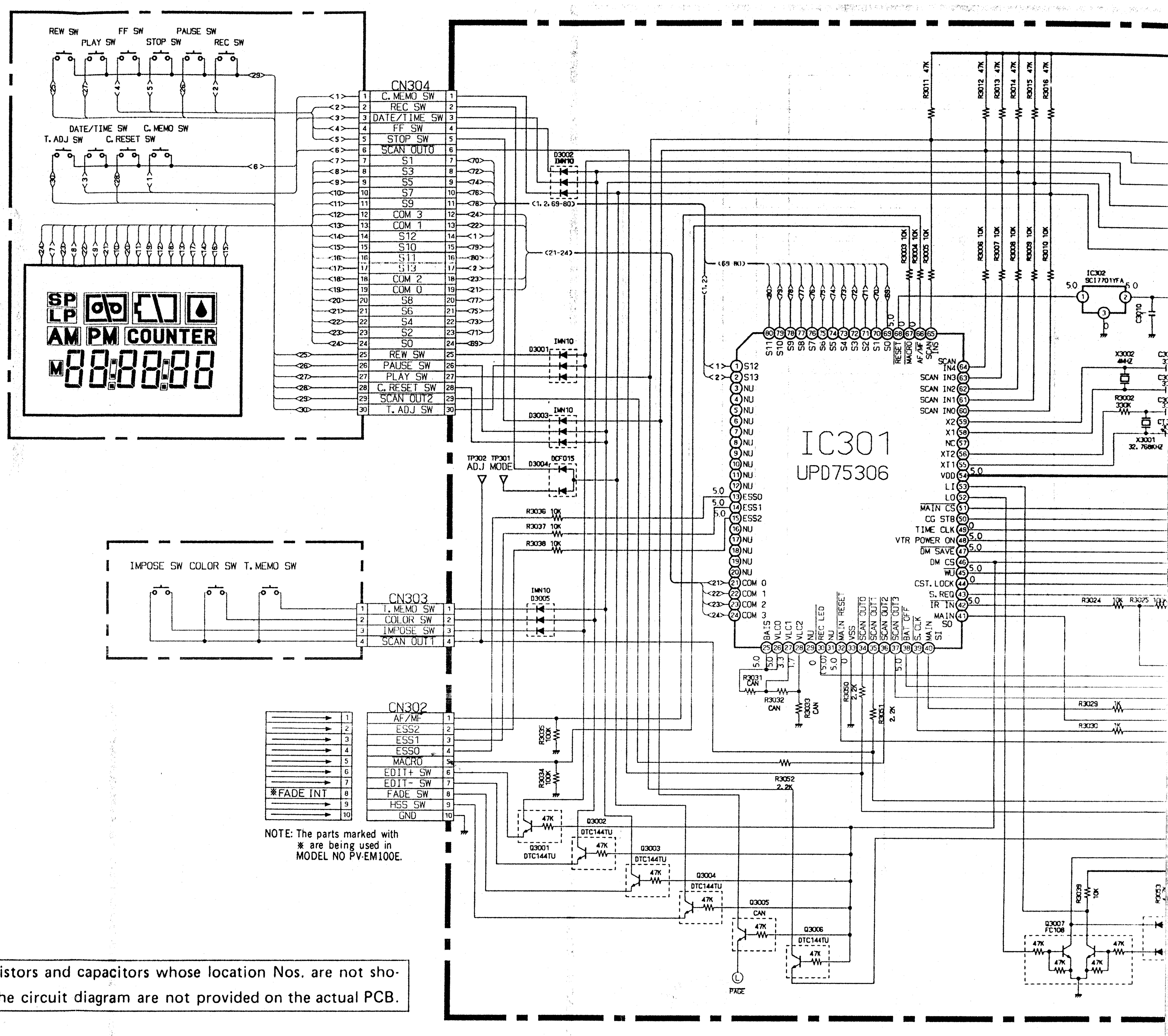
SY-1 BOARD


7.8msec
IC 301 ㉑ ㉒ ㉓ ㉔
V(20m sec)
IC 301 ㊸ S.REQ (51) MAIN CS
V
IC 301 ㊻ DM.CS
V
IC 301 ㊿ CG.STB
V (20m sec)
IC 301 (52) LO
V(20m sec)
IC 301 (53) LI

SY-1 BOARD SIDE B


IC301
CN302
ES4P SY1
X3001
TP302
TP301
ADJ
MODE
SIDE-B
GND
CN303
2AG4B11A19700
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
1

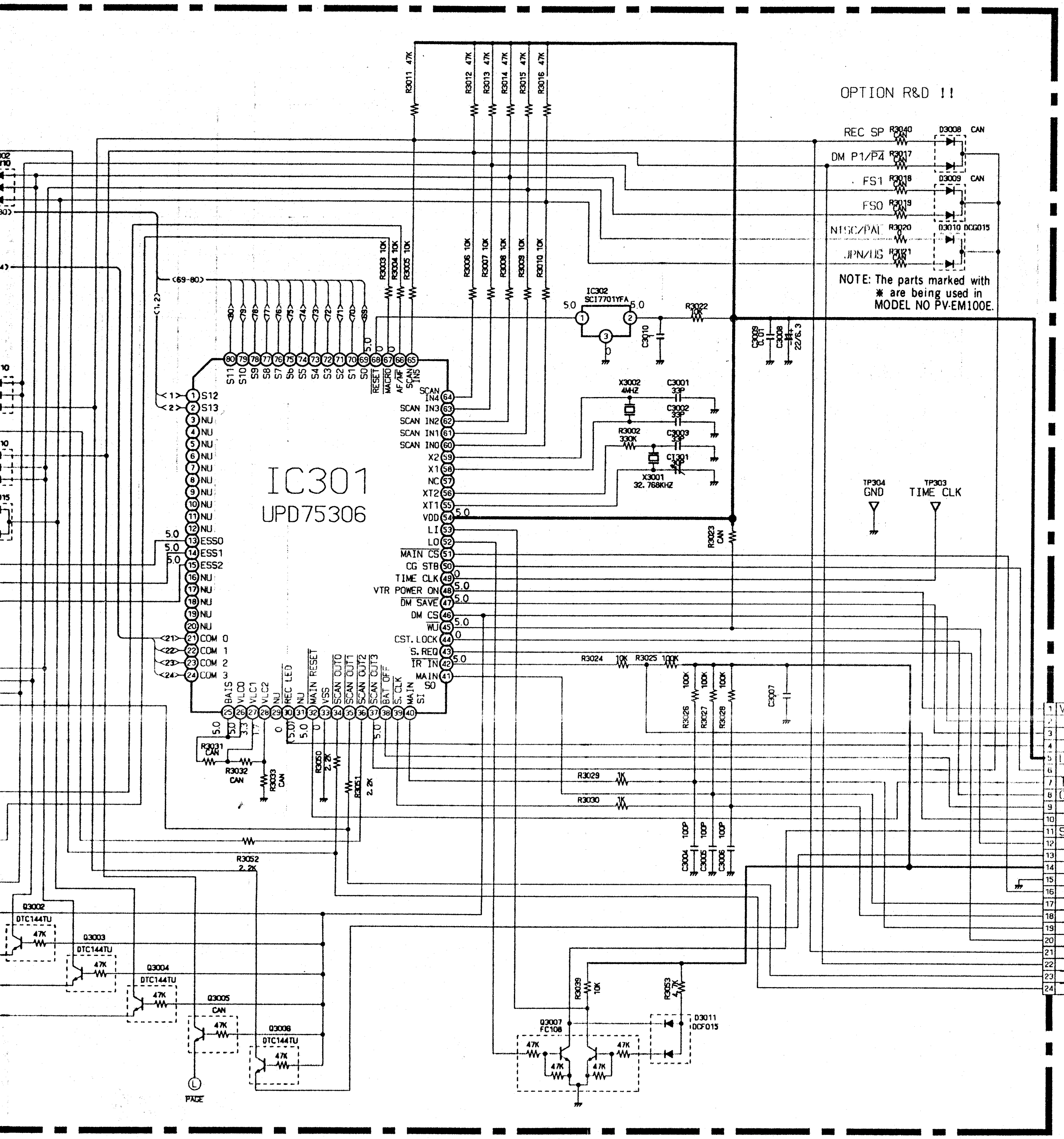
SY-1 CIRCUIT


REW SW
PLAY SW
FF SW
STOP SW
PAUSE SW
REC SW
DATE/TIME SW
C. MEMO SW
T. ADJ SW
C. RESET SW
SP
LP
AM
PM
COUNTER
M
CN304
C. MEMO SW
REC SW
DATE/TIME SW
FF SW
STOP SW
SCAN OUT0
S1
S3
S5
S7
S9
COM 3
COM 1
S12
S10
S11
S13
COM 2
COM 0
S8
S6
S4
S2
S0
REW SW
PAUSE SW
PLAY SW
C. RESET SW
SCAN OUT2
T. ADJ SW
IMPOSE SW
COLOR SW
T. MEMO SW
CN303
T. MEMO SW
COLOR SW
IMPOSE SW
SCAN OUT1
CN302
AF/MF
ESS2
ESS1
ESS0
MACRO
EDIT+ SW
EDIT- SW
※FADE INT
FADE SW
HSS SW
GND
TP302
TP301
ADJ
MODE
IC301
UPD75306
IC302
SC1770YFA
X3001
32.768KHZ
X3002
4MHZ
D3001
D3002
D3003
D3004
D3005
IMN10
DCF015
Q3001
Q3002
Q3003
Q3004
Q3005
Q3006
Q3007
DTC144TU
FC108
FADE
MAIN CS
CG STB
TIME CLK
VTR POWER ON
DM SAVE
DM CS
CST. LOCK
S. REQ
IR IN
MAIN SO
SCAN IN0
SCAN IN1
SCAN IN2
SCAN IN3
XT1
XT2
X1
X2
VDD
LI
LO
5.0

NOTE: The parts marked with ※ are being used in MODEL NO PV-EM100E.

Note: The resistors and capacitors whose location Nos. are not shown in the circuit diagram are not provided on the actual PCB.

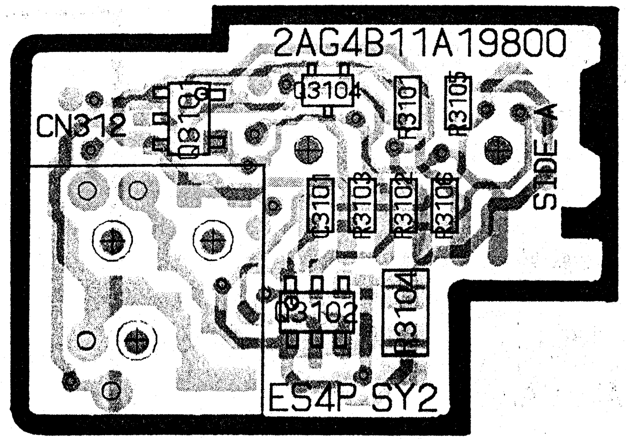
SY-1 CIRCUIT


IC301
UPD75306
IC302
SC17701YFA
OPTION R&D !!
REC SP
DM P1/P4
FS1
FS0
NTSC/PAL
JPN/UG
TP304
GND
TP303
TIME CLK
X3002
4MHZ
X3001
32.768KHZ
Q3007
FC108
Q3011
DCF015
Q3002
DTC144TU
Q3003
DTC144TU
Q3004
DTC144TU
Q3005
Q3006
DTC144TU
PAGE
CN301
1 VTR POWER ON
2 DM CS
3 DM SAVE
4 REC LED
5 LBT/ALWAYS5V
6 CG STB
7 MAIN RESET
8 CASS LOCK SW
9 BATT OFF
10 IR
11 SERIAL CONT
12 WAKE UP
13 IR OFF
14 S/S 5V
15 S/S GND
16 MAIN CS
17 MAIN SO
18 SCK
19 MAIN SI
20 S.REQ
21 SCAN IN5
22 SCAN IN4
23 SCAN OUT1
24 SCAN OUT0

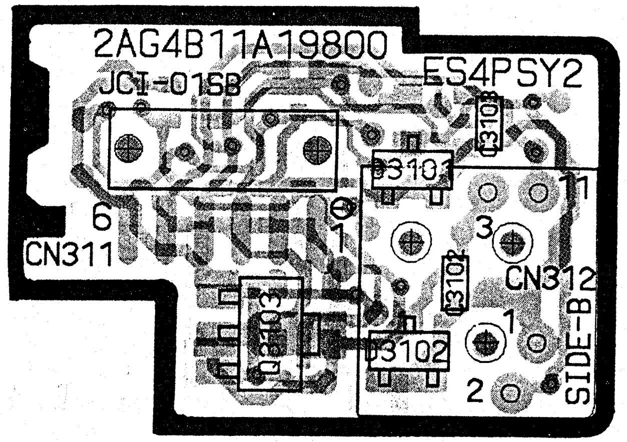
NOTE: The parts marked with * are being used in MODEL NO PV-EM100E.

*a: REC MODE
(b): PB MODE

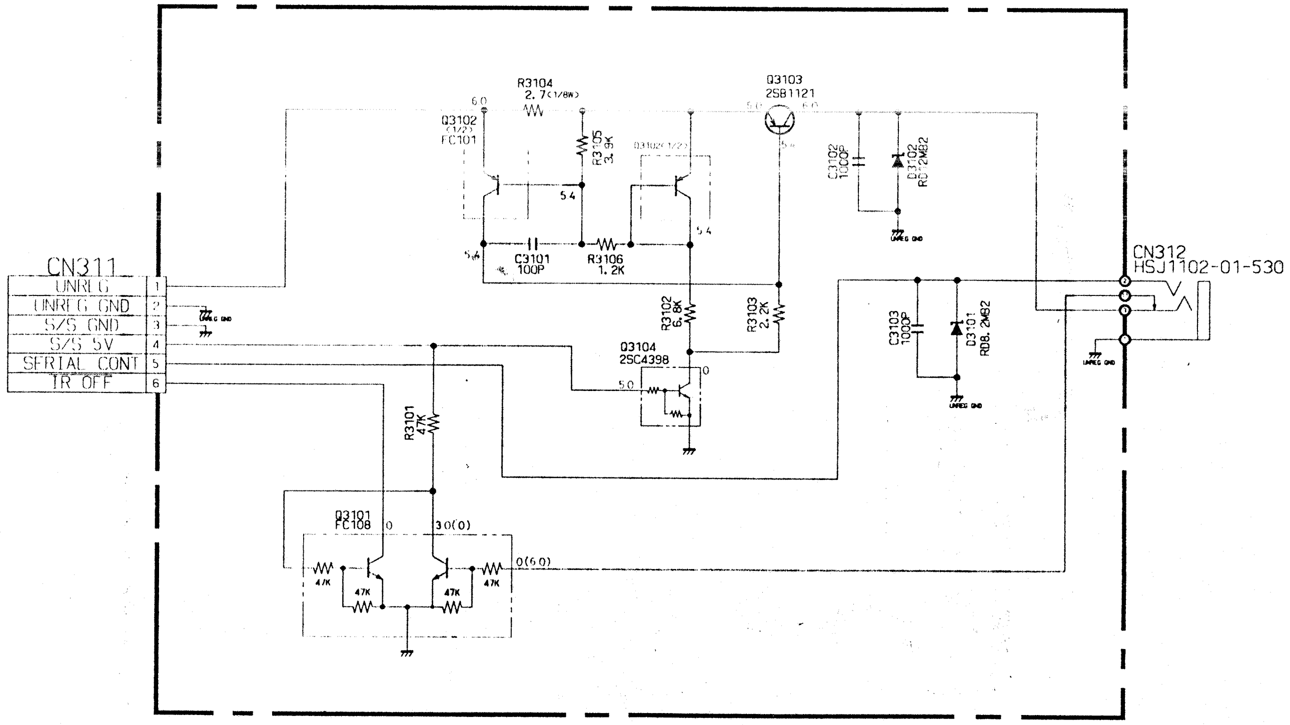
SY-2 BOARD SIDE A


2AG4B11A19800
CN312
Q3104
R3101
R3105
Q3101
R3103
R3102
R3106
C3101
Q3102
R3104
SIDE-A
ES4P SY2

SY-2 BOARD SIDE B


2AG4B11A19800
JCI-016B
ES4PSY2
Q3103
D3101
CN311
CN312
C3102
C3103
D3102
6
1
3
1
2
SIDE-B

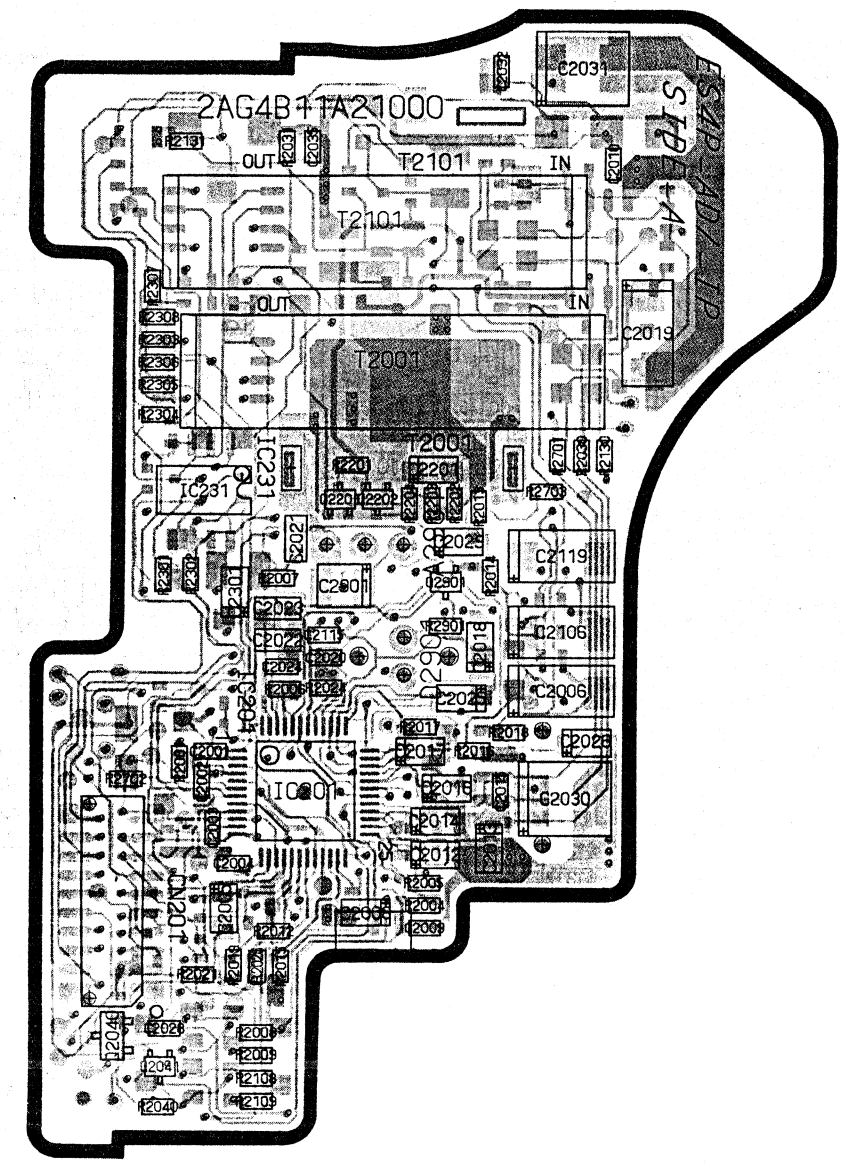
SY-2 CIRCUIT


CN311
1 UNREG
2 UNREG GND
3 S/S GND
4 S/S 5V
5 SERIAL CONT
6 IR OFF
CN312
HSJ1102-01-530
R3104
2.7
Q3102
FC101
Q3103
2SB1121
C3101
100P
R3106
1.2K
R3105
3.9K
R3102
6.8K
R3103
2.2K
C3102
100P
D3102
RD2M82
C3103
100P
D3101
RD8.2MB2
Q3104
2SC4398
R3101
47K
Q3101
FC108

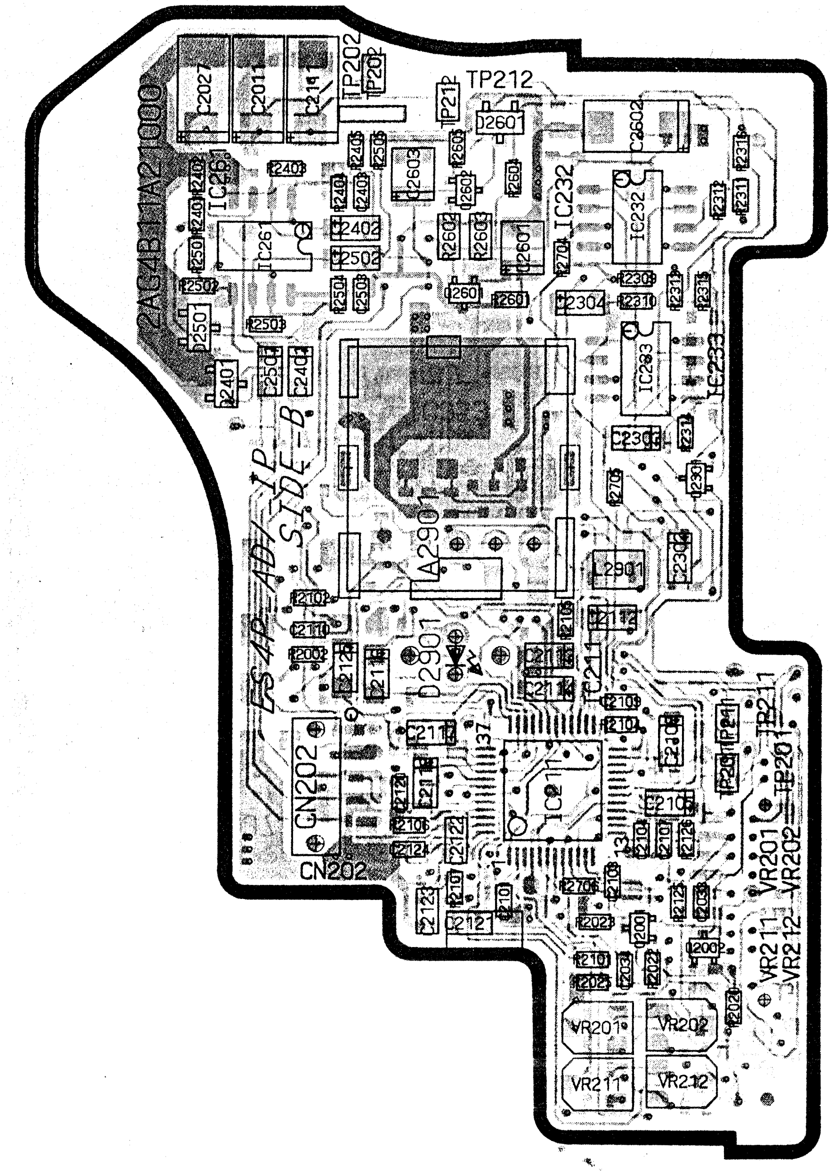
*a: REC MODE
( ): The parenthesized value represents the state where the remote control is not provided.

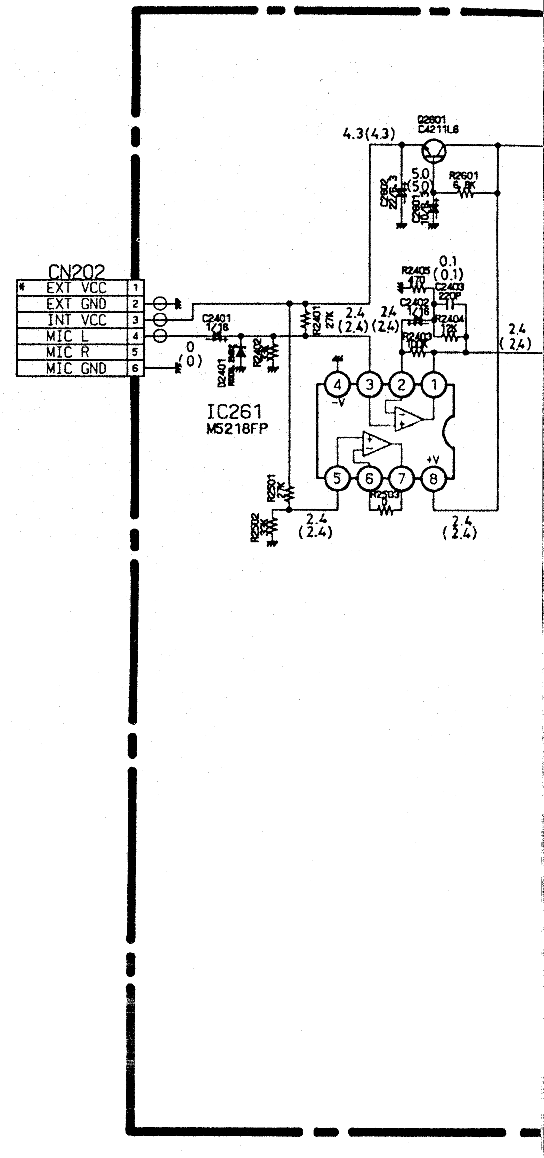
12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

AD-1 BOARD SIDE A

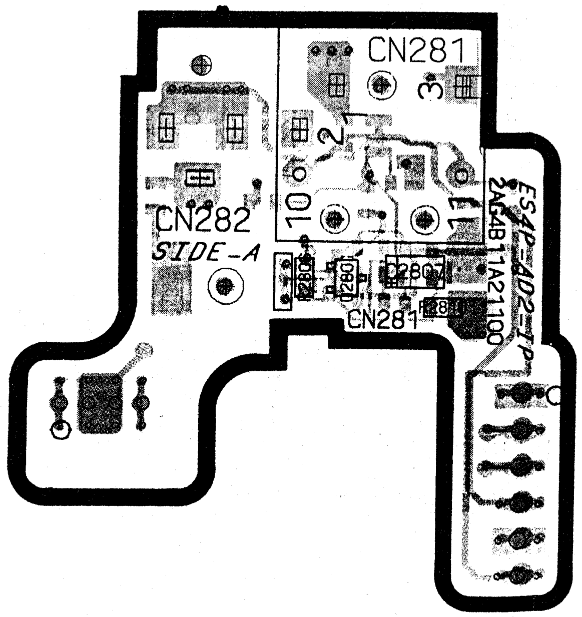

2AG4B11A21000
T2101
OUT
IN
T2001
IC231
IC201
C2119
C2106
C2006
C2030
C2019
ES4P AD1 1P SIDE-A

AD-1 BOARD SIDE B

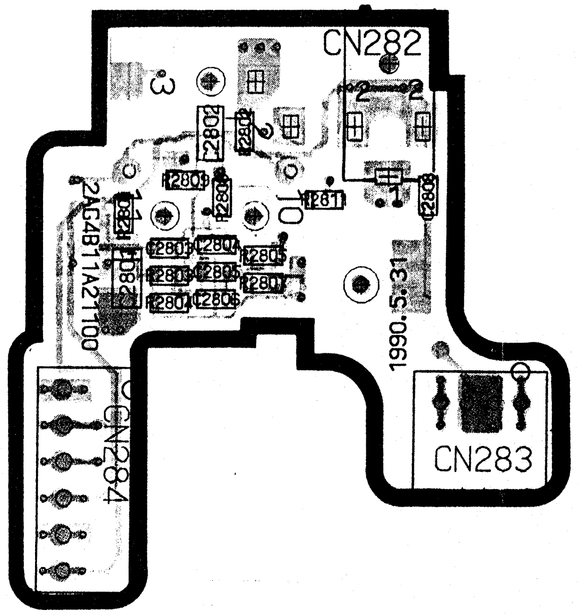

TP212
TP202
2AG4B11A21000
IC261
IC232
IC233
IC203
IC201
CN202
ES4P AD1 1P SIDE-B
VR201
VR202
VR211
VR212
TP211
TP201


CN202
EXT VCC
EXT GND
INT VCC
MIC L
MIC R
MIC GND
IC261
M5218FP
Q2601
C4211L8
4.3(4.3)
R2601
6.8K
2.4
(2.4)

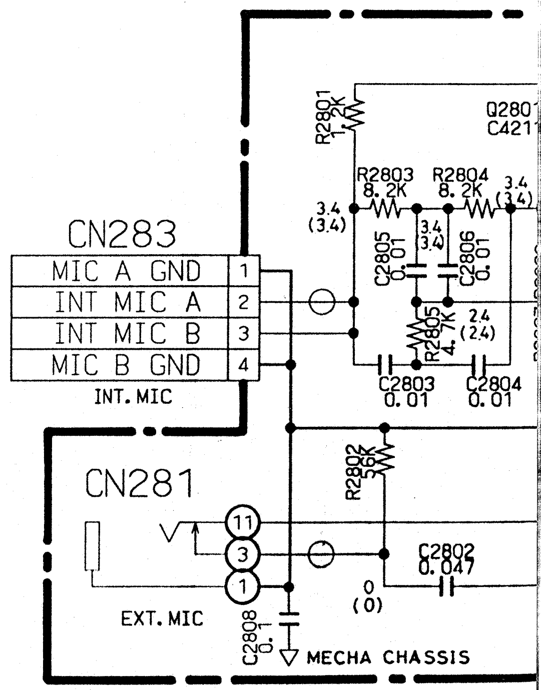
AD-2 BOARD SIDE A

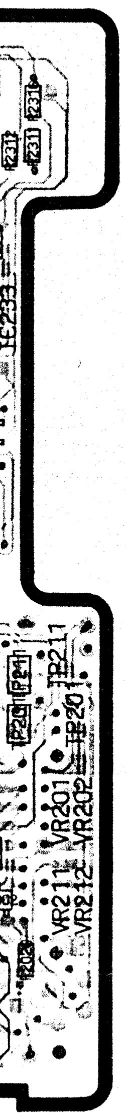

CN281
CN282
SIDE-A
CN281
2AG4B11A21100
ES4P AD2 1P

AD-2 BOARD SIDE B

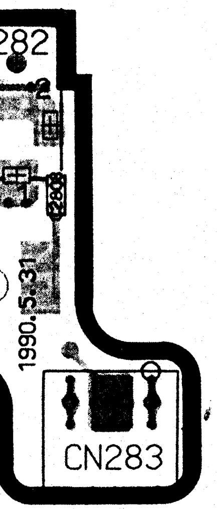

CN282
2AG4B11A21100
CN284
CN283
1990.5.31

AD-2

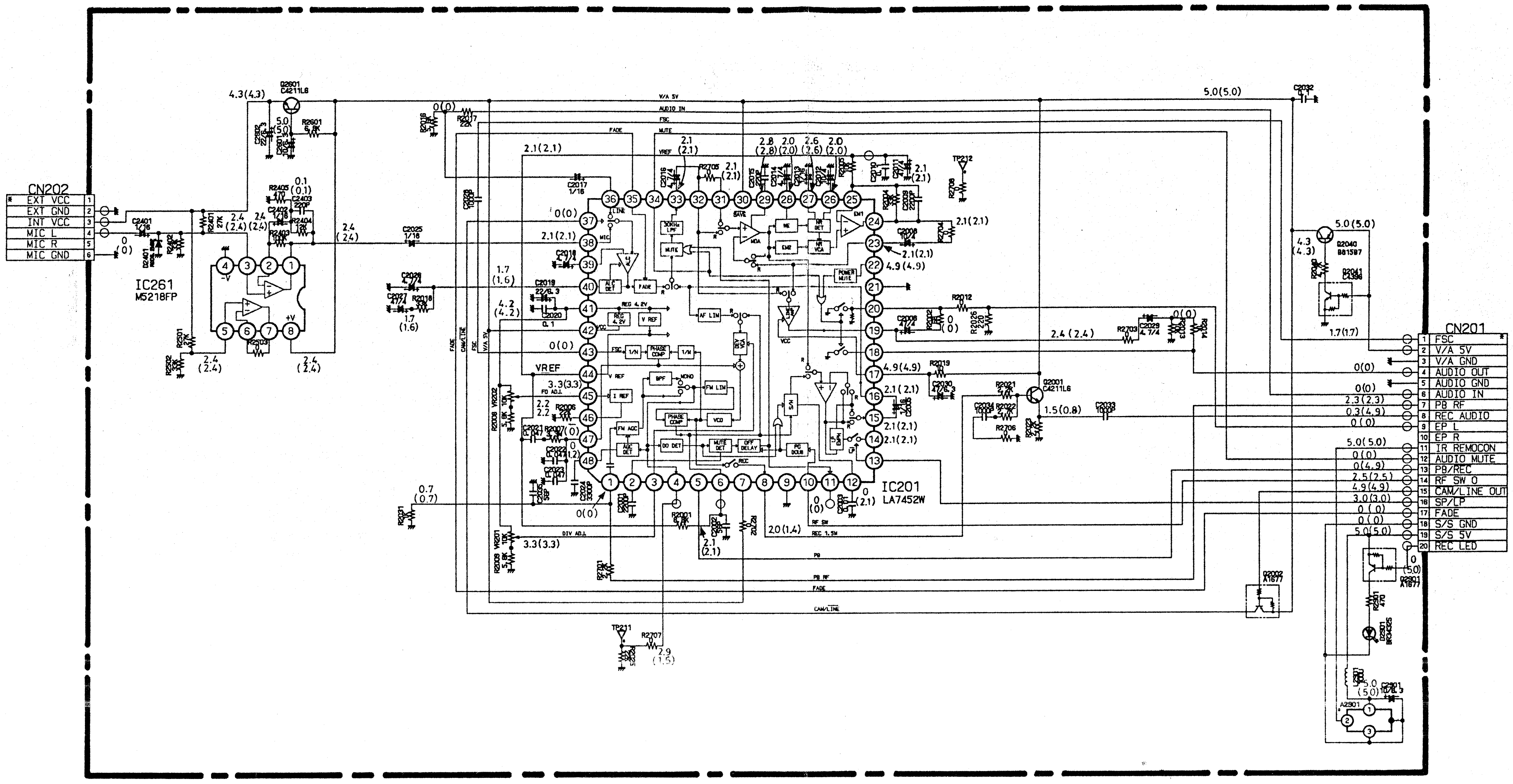

R2801
1.2K
Q2801
C4211
R2803
8.2K
R2804
8.2K
3.4
(3.4)
C2805
0.01
C2806
0.01
R2805
4.7K
2.4
(2.4)
CN283
MIC A GND
INT MIC A
INT MIC B
MIC B GND
INT. MIC
C2803
0.01
C2804
0.01
R2802
36K
CN281
C2802
0.047
0
(0)
C2808
0.1
EXT. MIC
MECHA CHASSIS



DE B

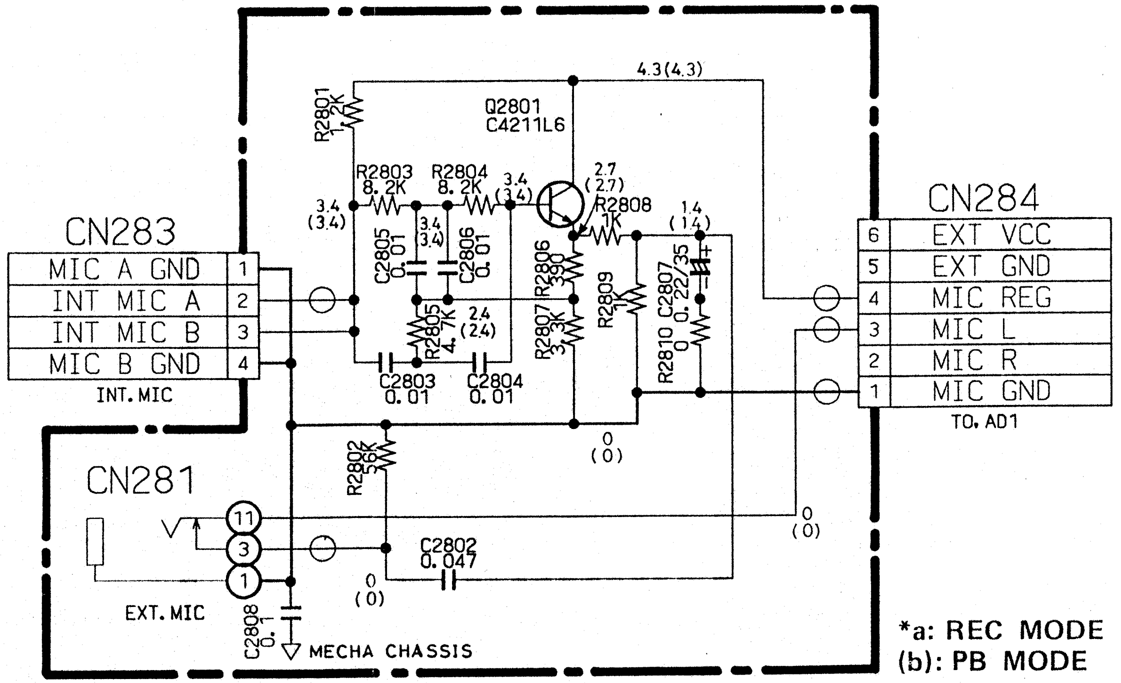

CN283
1990.5.31

AD-1 CIRCUIT


CN202
EXT VCC
EXT GND
INT VCC
MIC L
MIC R
MIC GND
IC261
M5218FP
Q2801
C4211L6
R2601
6.8K
4.3(4.3)
5.0(5.0)
IC201
LA7452W
VREF
CN201
FSC
V/A 5V
V/A GND
AUDIO OUT
AUDIO GND
AUDIO IN
PB RF
REC AUDIO
EP L
EP R
IR REMOCON
AUDIO MUTE
PB/REC
RF SW 0
CAM/LINE OUT
SP/LP
FADE
S/S GND
S/S 5V
REC LED
Q2001
C4211L6
Q2040
BB1597
Q2002
A1677
Q2901
A1677
A2901
TP211
TP212
R2707
2.9
(1.5)

*a: REC MODE
(b): PB MODE

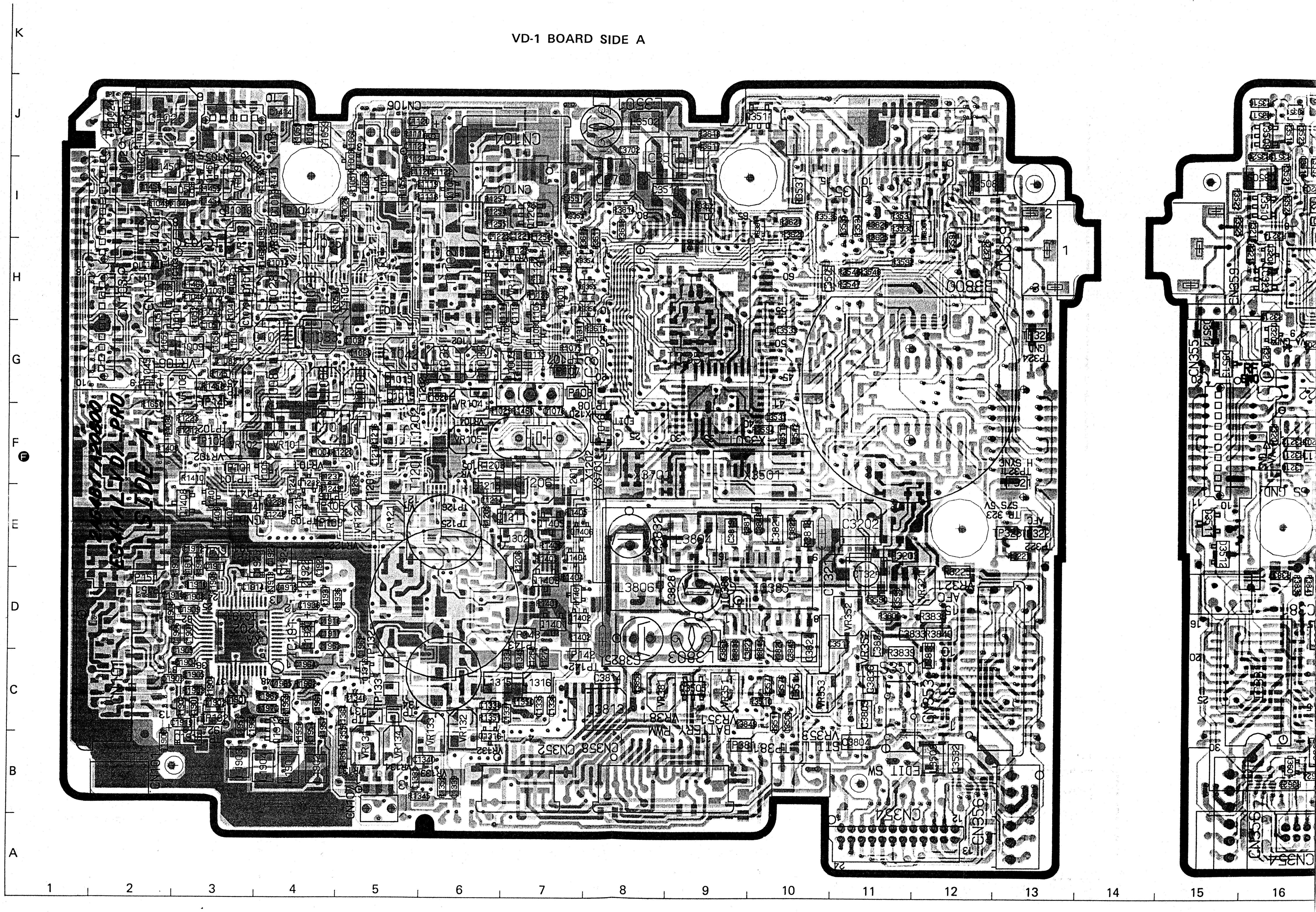
AD-2 CIRCUIT


4.3(4.3)
R2801
1.2K
Q2801
C4211L6
R2803
8.2K
R2804
8.2K
3.4
(3.4)
2.7
(2.7)
R2808
1K
1.4
(1.4)
C2805
0.01
C2806
0.01
R2806
390
R2805
4.7K
2.4
(2.4)
R2807
3.3K
R2809
C2807
0.22/35
R2810
0
C2803
0.01
C2804
0.01
0
(0)
CN283
MIC A GND
INT MIC A
INT MIC B
MIC B GND
INT.MIC
CN284
EXT VCC
EXT GND
MIC REG
MIC L
MIC R
MIC GND
TO AD1
R2802
CN281
EXT.MIC
C2802
0.047
C2808
0.1
MECHA CHASSIS

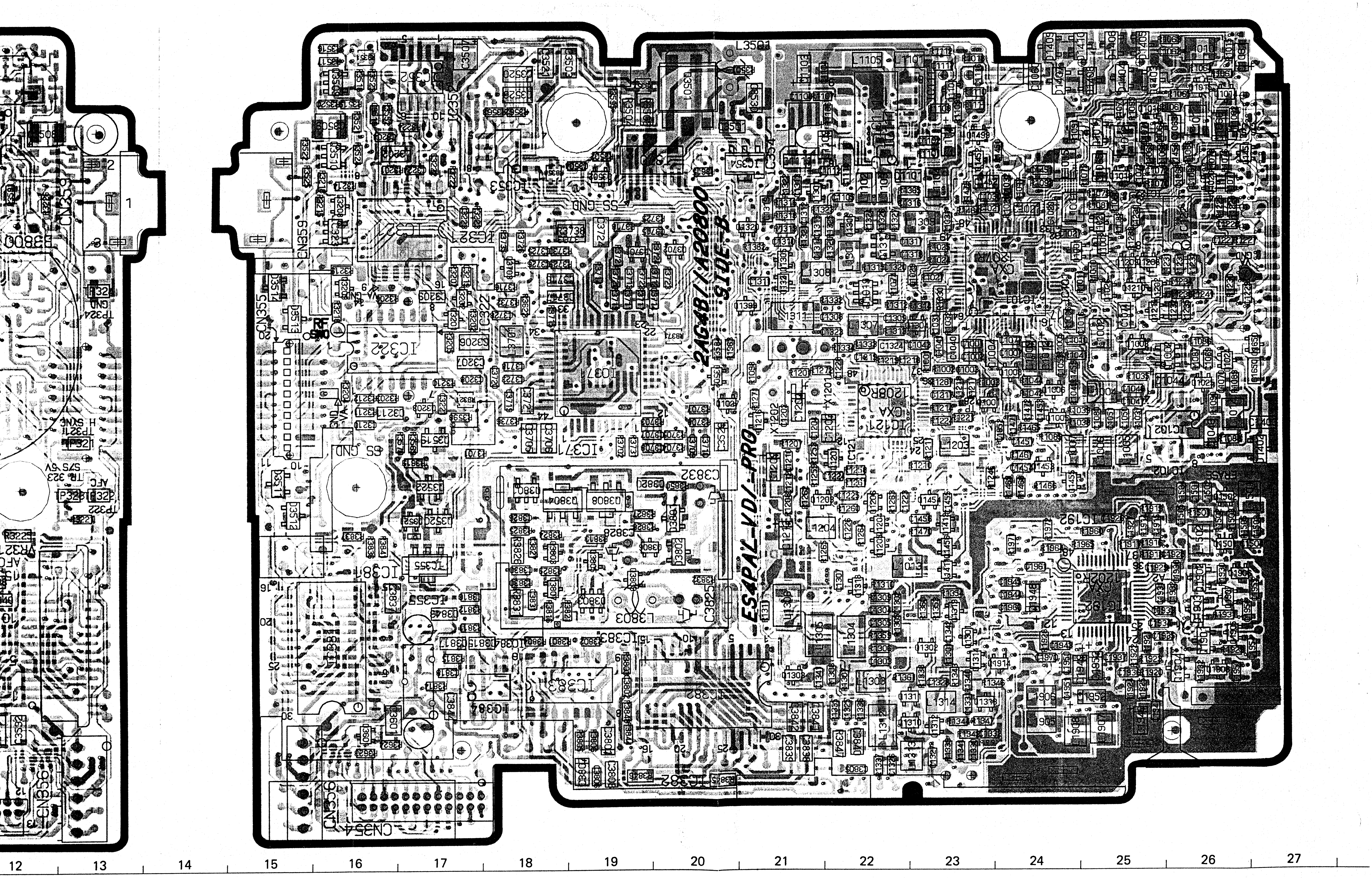
*a: REC MODE
(b): PB MODE

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

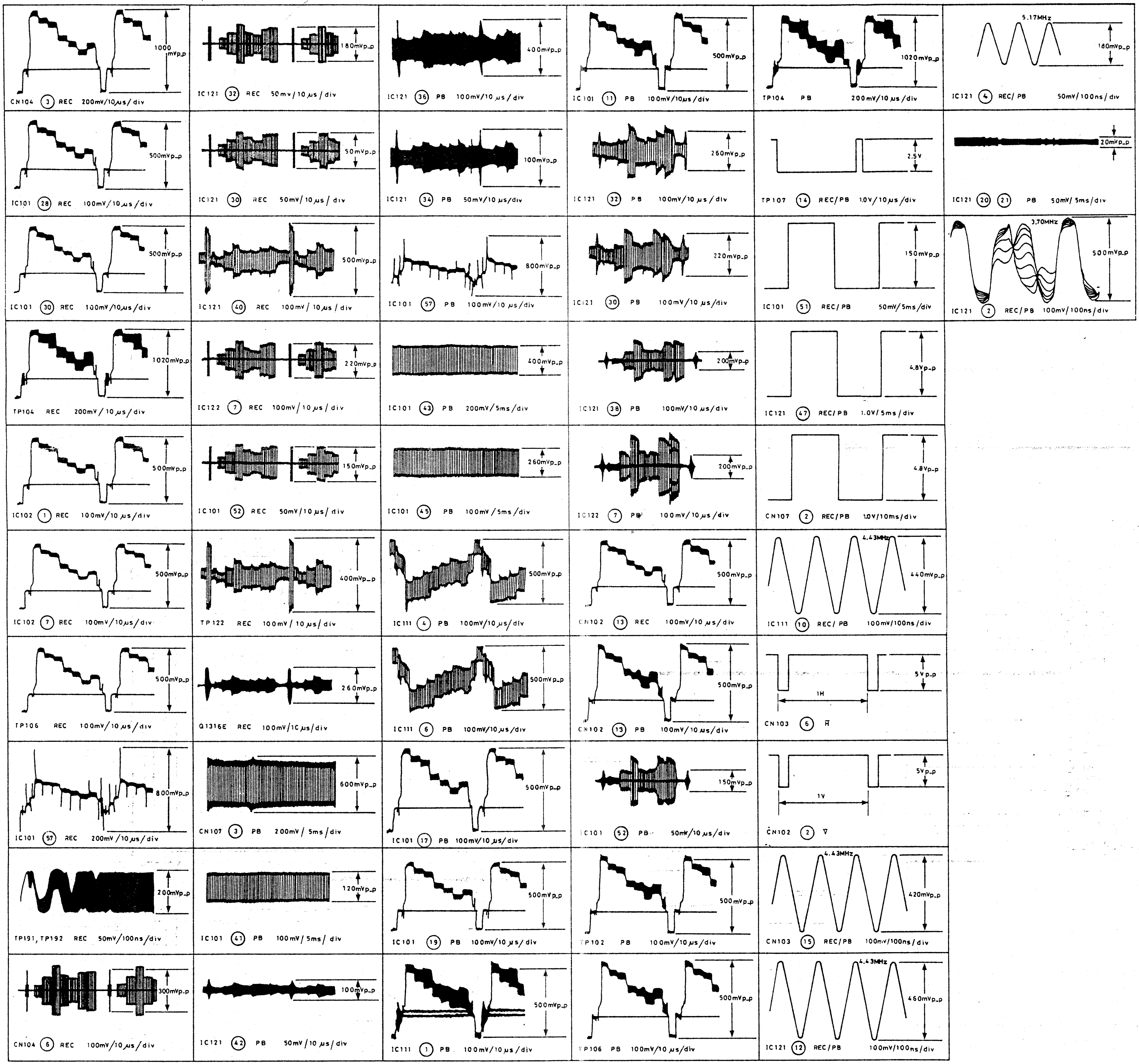
VD-1 BOARD SIDE A


K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
CN106
CN104
CN352
CN358
CN354
CN356
CN355
CN353
CN101
TP104
TP125
TP126
TP132
TP133
TP142
TP321
TP322
TP324
X3501
X3701
X1201
VR104
VR105
VR131
VR132
VR133
VR134
VR321
VR352
VR353
VR381
L3806
L3804
C3202
C3803
C3823
C3812
EDIT SW
BATTERY PWM
STILL
H SYNC
AFC
GND
RF
SIDE-A

VD-1 BOARD SIDE B


12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
2AG4B//A20800
SIDE-B
ES4PAL-VD1-PRO
CN359
CN355
CN356
CN354
IC322
IC321
IC371
IC381
IC383
IC382
IC353
IC354
IC355
IC121
IC102
IC192
SS GND
RF GND
L3501
L3803
C3825
C3832
AFC
H SYNC
TP321
TP322
TP323
TP324

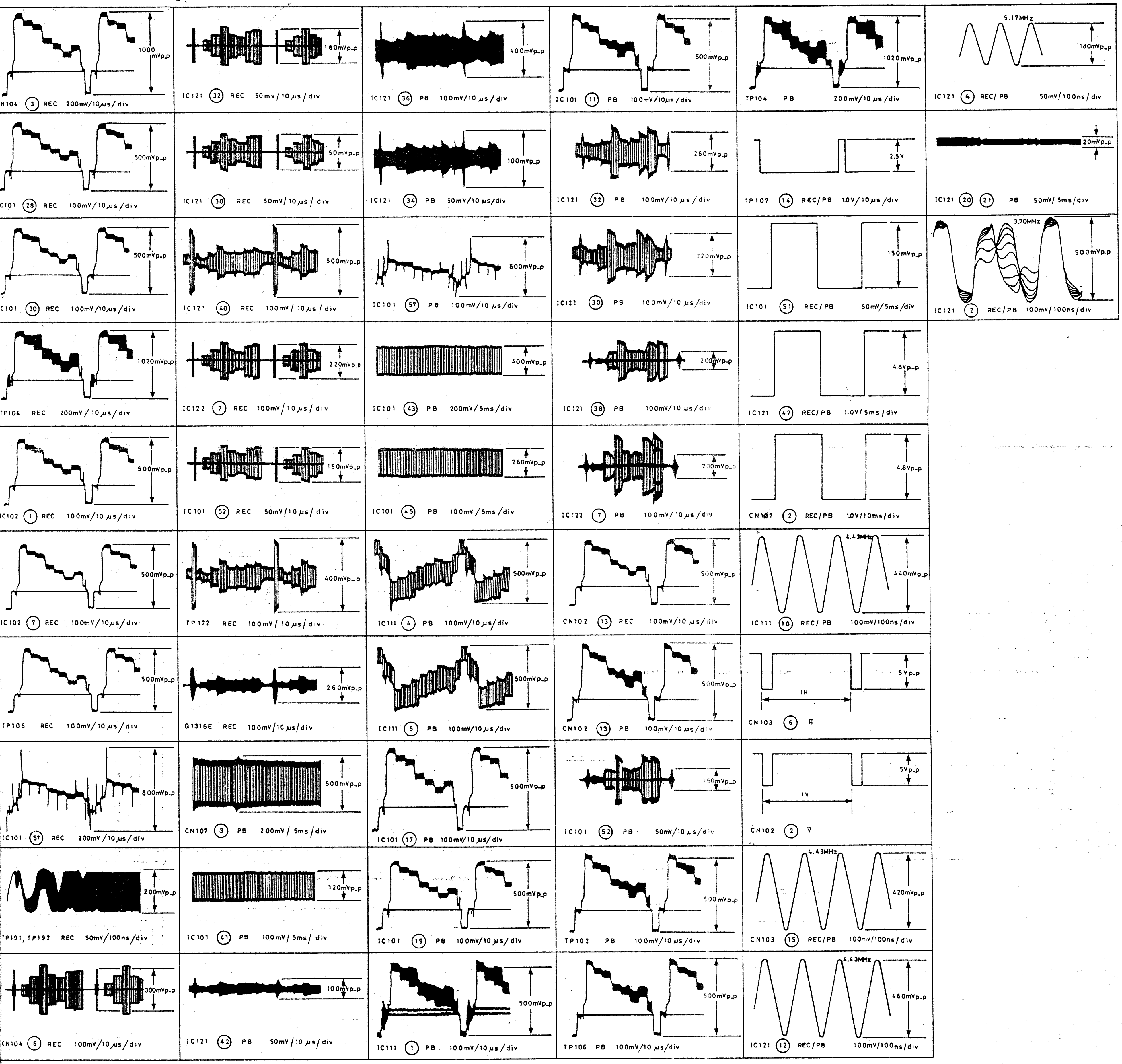
VD-1 BOARD (VIDEO/AUDIO)

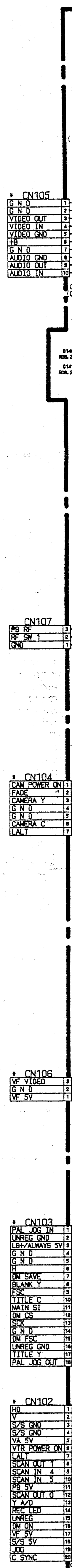


O
N
M
L
K
J
I
H
G
F
E
D
C
B
A

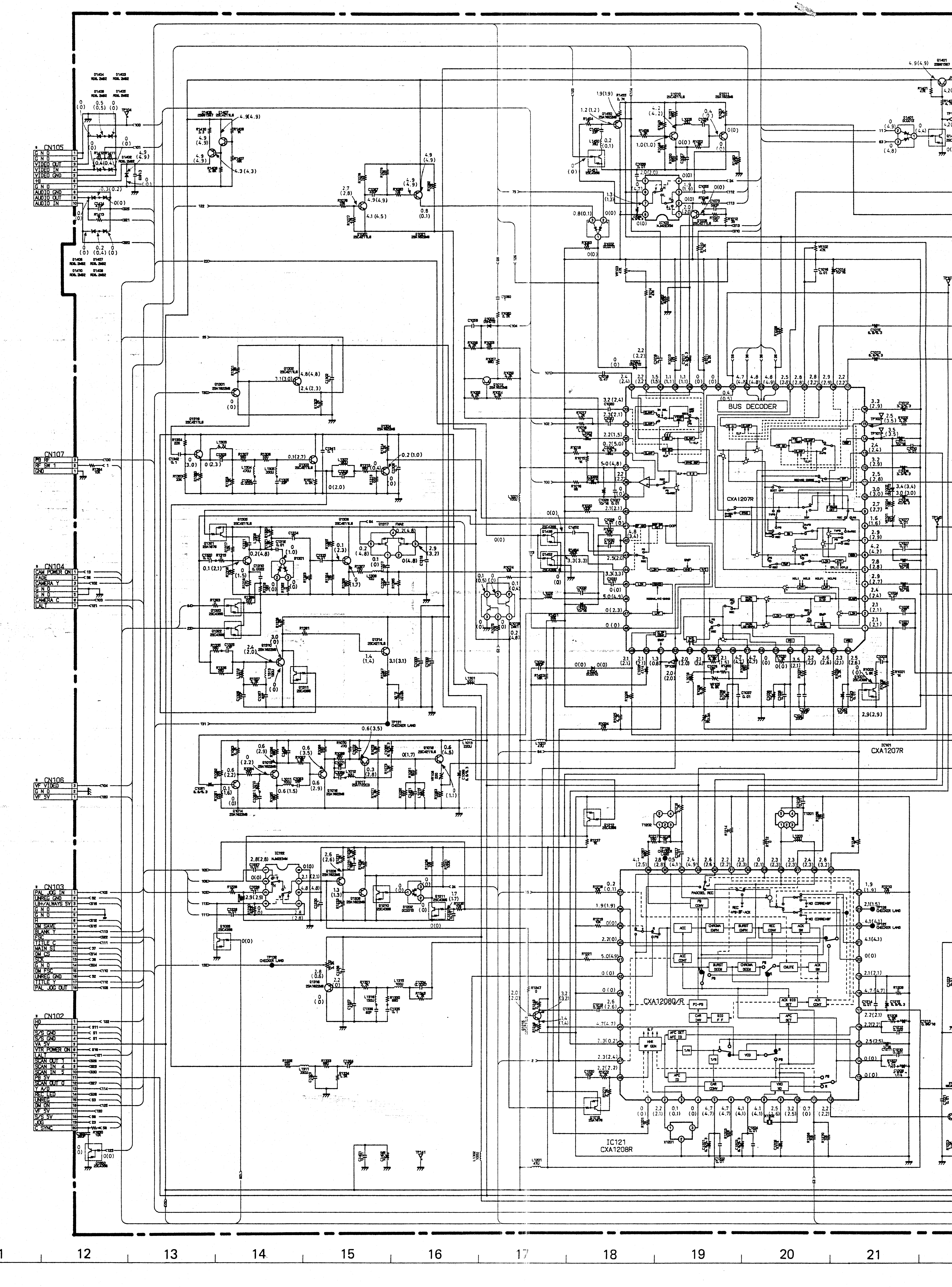
1 2 3 4 5 6 7 8 9 10

D-1 BOARD (VIDEO/AUDIO)

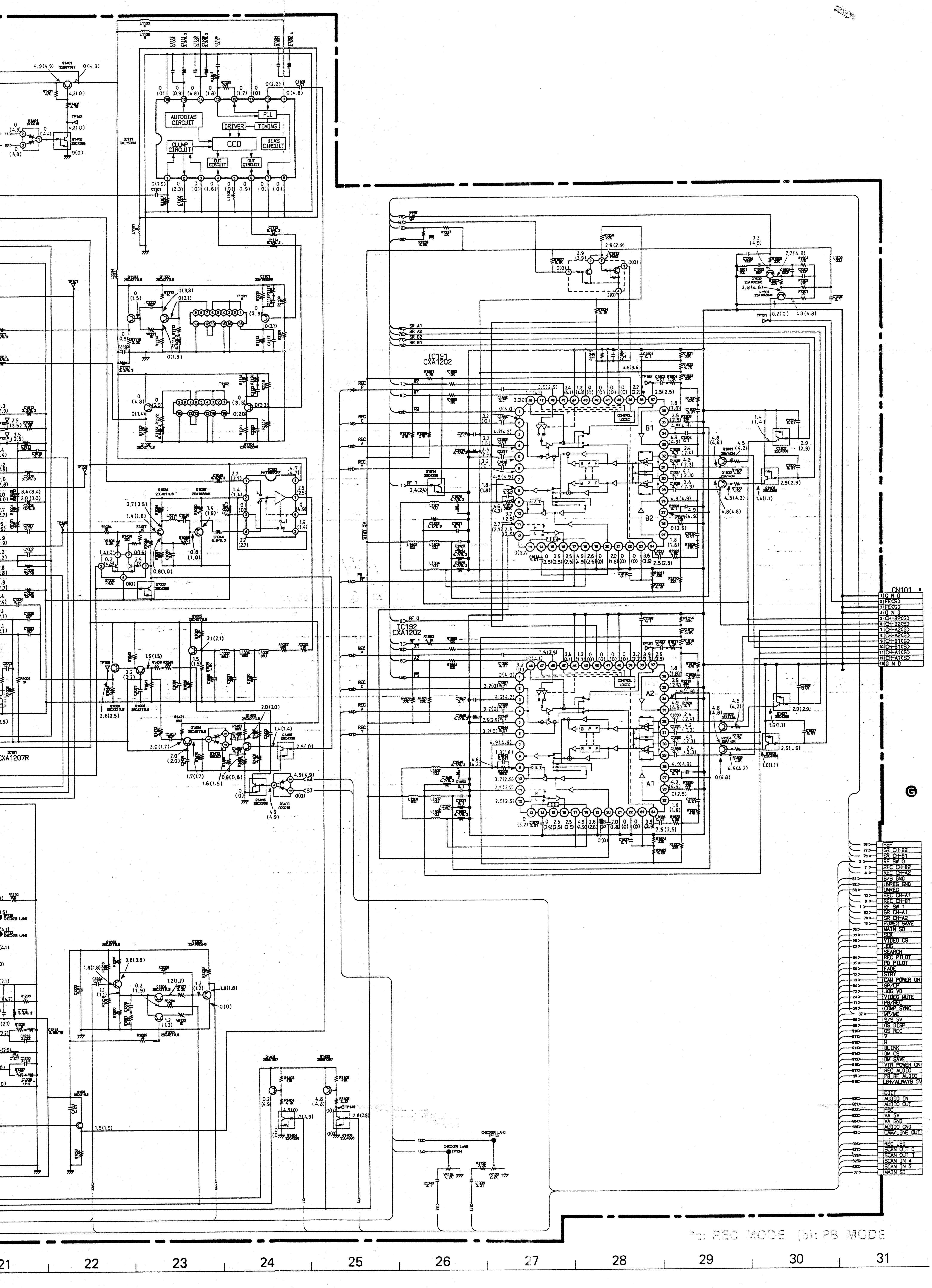



* CN105
G N D 1
G N D 2
VIDEO OUT 3
VIDEO IN 4
VIDEO GND 5
+B 6
G N D 7
AUDIO GND 8
AUDIO OUT 9
AUDIO IN 10
CN107
PB RF 3
RF SW 1 2
GND 1
* CN104
CAM POWER ON 1
FADE 2
CAMERA Y 3
G N D 4
G N D 5
CAMERA C 6
LALT 7
* CN106
VF VIDEO 3
G N D 2
VF 5V 1
* CN103
PAL JOG IN 1
UNREG GND 2
LB+/ALWAYS 5V 3
G N D 4
G N D 5
H 6
DM SAVE 7
BLANK Y 8
FSC 9
TITLE C 10
MAIN SI 11
DM CS 12
SCK 13
G N D 14
DM FSC 15
UNREG GND 16
TITLE Y 17
PAL JOG OUT 18
* CN102
HD 1
V 2
S/S GND 3
S/S GND 4
VA 5V 5
VTR POWER ON 6
LALT 7
SCAN OUT 1 8
SCAN IN 4 9
SCAN IN 5 10
PB 5V 11
SCAN OUT 0 12
Y A/D 13
REC LED 14
UNREG 15
DM ON 16
VF 5V 17
S/S 5V 18
JOG 19
C SYNC 20

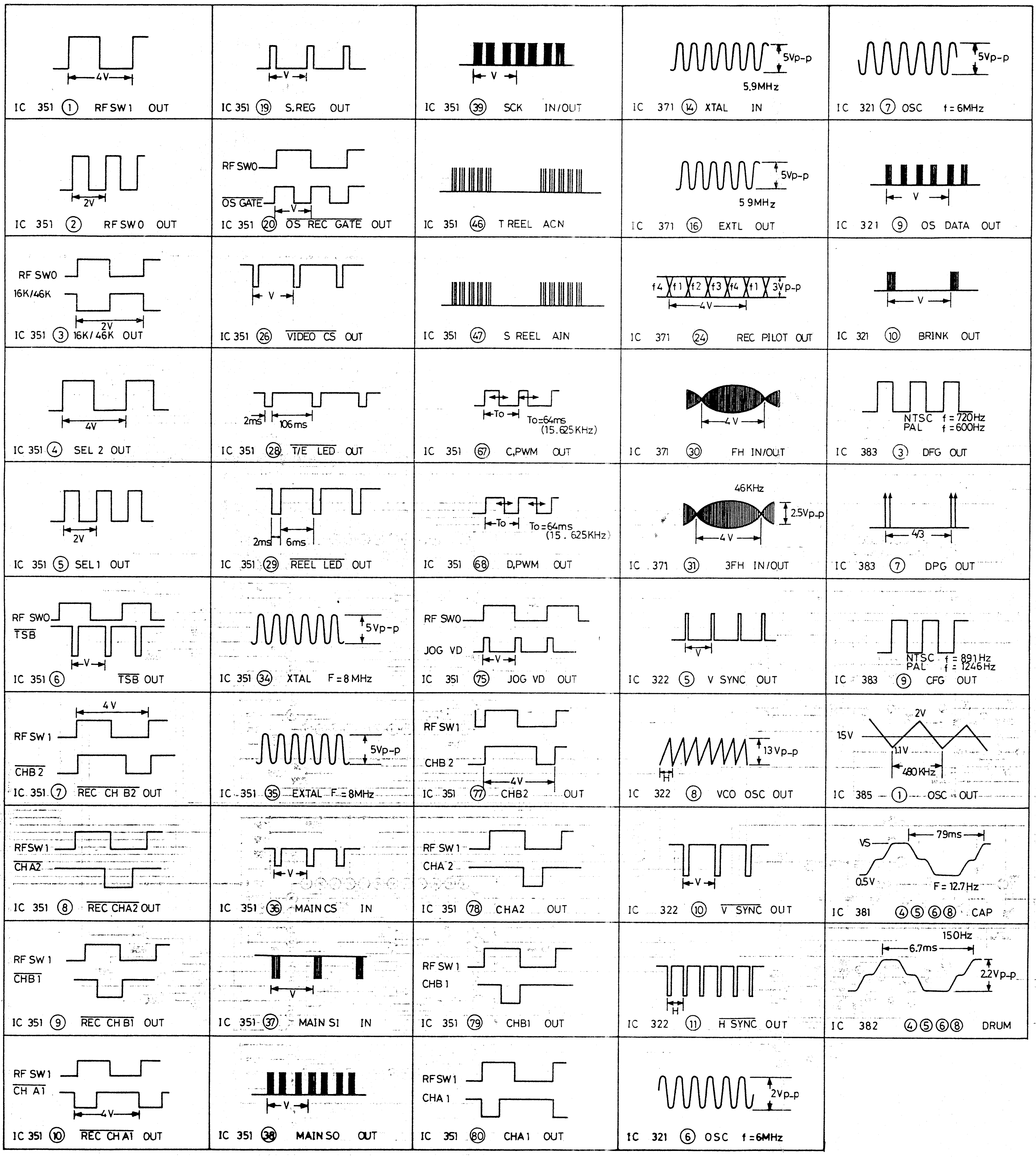
2 3 4 5 6 7 8 9 10 11


CN105
GND
GND
VIDEO OUT
VIDEO IN
VIDEO GND
+B
GND
AUDIO GND
AUDIO OUT
AUDIO IN
CN107
PB RF
RF SW 1
GND
CN104
CAM POWER ON
FADE
CAMERA Y
GND
GND
CAMERA C
LALT
CN106
VF VIDEO
GND
VF 5V
CN103
PAL JOG IN
UNREG GND
LB+/ALWAYS 5V
GND
GND
H
DM SAVE
BLANK Y
FSC
TITLE C
MAIN SI
DM CS
SCK
GND
DM FSC
UNREG GND
TITLE Y
PAL JOG OUT
CN102
HD
V
S/S GND
S/S GND
VA 5V
VTR POWER ON
LALT
SCAN OUT 1
SCAN IN 4
SCAN IN 5
PB 5V
SCAN OUT 0
Y A/D
REC LED
UNREG
DM ON
VF 5V
S/S 5V
JOG
C SYNC
BUS DECODER
CXA1207R
IC101
CXA1207R
IC122
CXA1208Q/R
IC121
CXA1208R
TP131 CHECKER LAND
TP132 CHECKER LAND
11
12
13
14
15
16
17
18
19
20
21

CIRCUIT (VIDEO)


IC111
CXL1506M
AUTOBIAS CIRCUIT
CLUMP CIRCUIT
CCD
DRIVER
TIMING
PLL
BIAS CIRCUIT
OUT CIRCUIT
OUT CIRCUIT
IC101
CXA1207R
IC191
CXA1202
IC192
CXA1202
CONTROL LOGIC
B P F
D E T
B1
B2
A1
A2
REC P
REC C
REC A
REC Y
PB RF
RF 1
RF 0
STBY 5V
CHECKER LAND
CN101
1 G N D
2 FE(S)
3 FE(G)
4 G N D
5 CH-B2(G)
6 CH-B2(S)
7 CH-A2(G)
8 CH-A2(S)
9 CH-B1(G)
10 CH-B1(S)
11 CH-A1(G)
12 CH-A1(S)
13 G N D
G
FEP
SR CH-B2
SR CH-B1
RF SW 0
REC CH-B2
REC CH-A2
S/S GND
UNREG GND
UNREG
REC CH-A1
REC CH-B1
RF SW 1
SR CH-A1
SR CH-A2
POWER SAVE
MAIN SO
SCK
VIDEO CS
JOG
SEARCH
REC PILOT
PB PILOT
FADE
STBY
CAM POWER ON
SP/LP
JOG VD
VIDEO MUTE
PB/REC
COMP SYNC
MP/ME
S/S 5V
OS DISP
OS REC
V
H
BLINK
DM CS
DM SAVE
VTR POWER ON
REC AUDIO
PB RF AUDIO
LB+/ALWAYS 5V
EDIT
AUDIO IN
AUDIO OUT
FSC
VA 5V
VA GND
AUDIO GND
CAM/LINE OUT
REC LED
SCAN OUT 0
SCAN OUT 1
SCAN IN 4
SCAN IN 5
MAIN SI
( ): REC MODE ( ): PB MODE
21
22
23
24
25
26
27
28
29
30
31

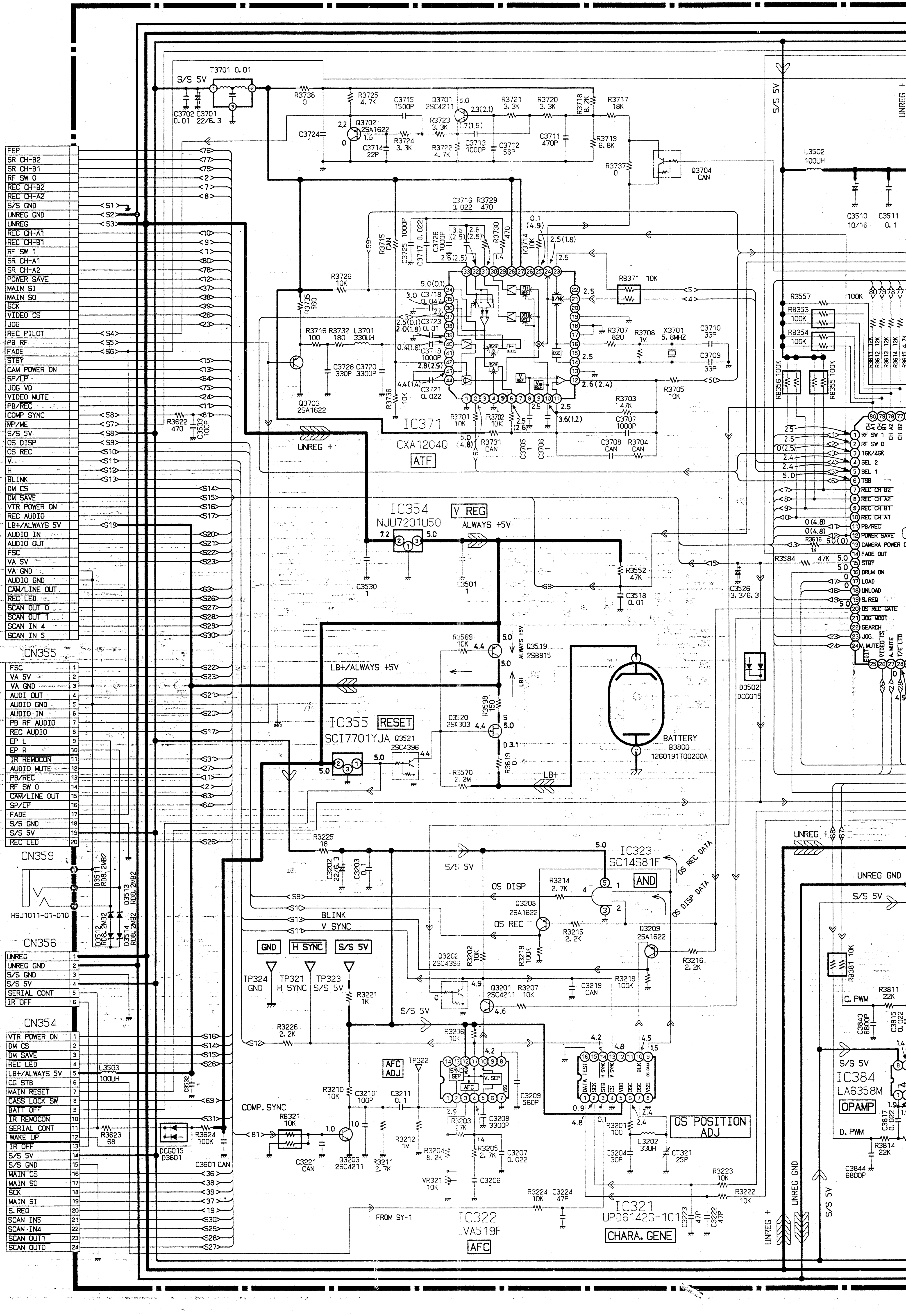
VD-1 BOARD (SERVO)

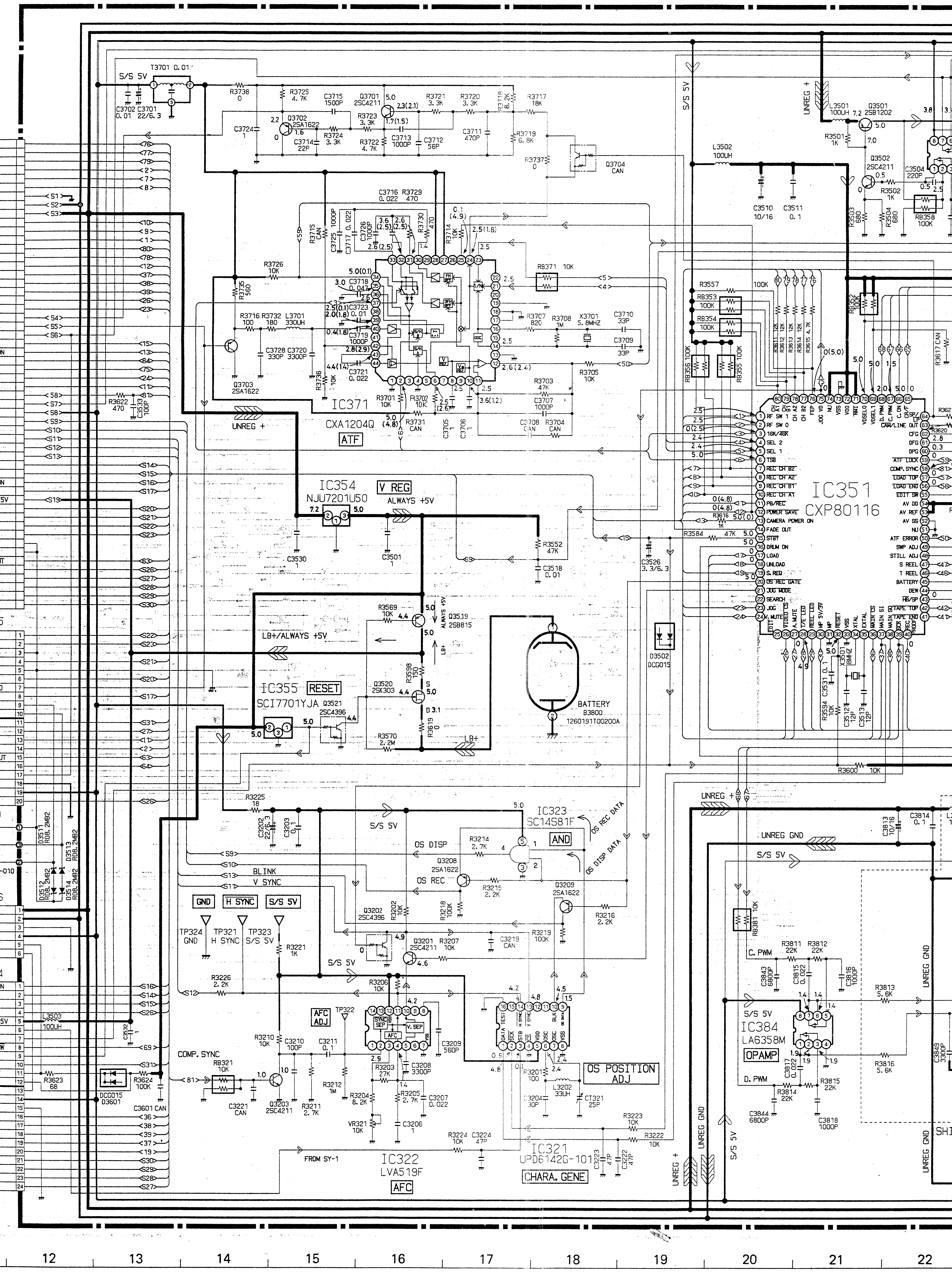

4V
IC 351 ① RFSW1 OUT
V
IC 351 ⑲ S.REG OUT
V
IC 351 ㊴ SCK IN/OUT
5Vp-p
5.9MHz
IC 371 ⑭ XTAL IN
5Vp-p
IC 321 ⑦ OSC f=6MHz
2V
IC 351 ② RFSW0 OUT
RF SW0
OS GATE
V
IC 351 ⑳ OS REC GATE OUT
IC 351 ㊻ T REEL ACN
5Vp-p
5.9MHz
IC 371 ⑯ EXTL OUT
V
IC 321 ⑨ OS DATA OUT
RF SW0
16K/46K
2V
IC 351 ③ 16K/46K OUT
V
IC 351 ㉖ VIDEO CS OUT
IC 351 ㊼ S REEL AIN
f4 f1 f2 f3 f4 f1
3Vp-p
4V
IC 371 ㉔ REC PILOT OUT
V
IC 321 ⑩ BRINK OUT
4V
IC 351 ④ SEL 2 OUT
2ms
106ms
IC 351 ㉘ T/E LED OUT
To
To=64ms (15.625KHz)
IC 351 (67) C.PWM OUT
4V
IC 371 ㉚ FH IN/OUT
NTSC f=720Hz
PAL f=600Hz
IC 383 ③ DFG OUT
2V
IC 351 ⑤ SEL1 OUT
2ms
6ms
IC 351 ㉙ REEL LED OUT
To
To=64ms (15.625KHz)
IC 351 (68) D.PWM OUT
46KHz
2.5Vp-p
4V
IC 371 ㉛ 3FH IN/OUT
4/3
IC 383 ⑦ DPG OUT
RF SW0
TSB
V
IC 351 ⑥ TSB OUT
5Vp-p
IC 351 ㉞ XTAL F=8MHz
RF SW0
JOG VD
V
IC 351 (75) JOG VD OUT
V
IC 322 ⑤ V SYNC OUT
NTSC f=891Hz
PAL f=1246Hz
IC 383 ⑨ CFG OUT
4V
RF SW1
CHB2
IC 351 ⑦ REC CH B2 OUT
5Vp-p
IC 351 ㉟ EXTAL F=8MHz
RF SW1
CHB 2
4V
IC 351 (77) CHB2 OUT
13Vp-p
H
IC 322 ⑧ VCO OSC OUT
2V
15V
1.1V
480KHz
IC 385 ① OSC OUT
RFSW1
CHA2
IC 351 ⑧ REC CHA2 OUT
V
IC 351 ㊱ MAIN CS IN
RF SW1
CHA 2
IC 351 (78) CHA2 OUT
V
IC 322 ⑩ V SYNC OUT
79ms
VS
0.5V
F=12.7Hz
IC 381 ④⑤⑥⑧ CAP
RF SW 1
CHB1
IC 351 ⑨ REC CH B1 OUT
V
IC 351 ㊲ MAIN SI IN
RF SW 1
CHB 1
IC 351 (79) CHB1 OUT
H
IC 322 ⑪ H SYNC OUT
150Hz
6.7ms
2.2Vp-p
IC 382 ④⑤⑥⑧ DRUM
RF SW1
CH A1
4V
IC 351 ⑩ REC CHA1 OUT
V
IC 351 ㊳ MAIN SO OUT
RFSW1
CHA 1
IC 351 (80) CHA1 OUT
2Vp-p
IC 321 ⑥ OSC f=6MHz

TO-AD1

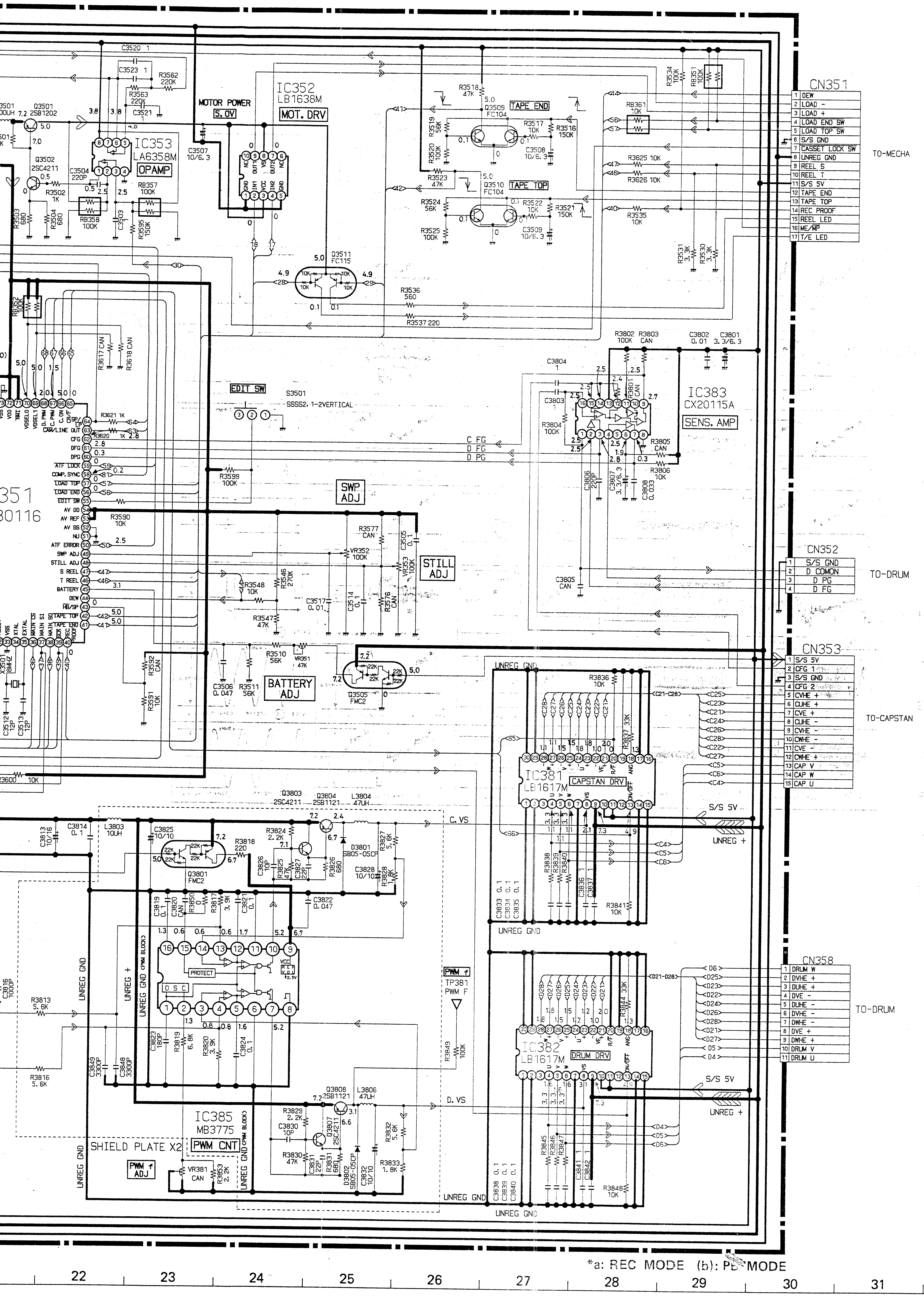
TO-SY2

TO-SY1


T3701 0.01
S/S 5V
C3702 0.01
C3701 22/6.3
R3738 0
R3725 4.7K
C3715 1500P
Q3701 2SC4211
R3721 3.3K
R3720 3.3K
R3718 8.2K
R3717 18K
Q3702 2SA1622
R3723 3.3K
R3724 3.3K
R3722 4.7K
C3713 1000P
C3712 56P
C3711 470P
R3719 6.8K
C3724 1
C3714 22P
R3737 0
Q3704 CAN
L3502 100UH
C3510 10/16
C3511 0.1
S/S 5V
UNREG +
FEP
SR CH-B2
SR CH-B1
RF SW 0
REC CH-B2
REC CH-A2
S/S GND
UNREG GND
UNREG
REC CH-A1
REC CH-B1
RF SW 1
SR CH-A1
SR CH-A2
POWER SAVE
MAIN SI
MAIN SO
SCK
VIDEO CS
JOG
REC PILOT
PB RF
FADE
STBY
CAM POWER ON
SP/LP
JOG VD
VIDEO MUTE
PB/REC
COMP SYNC
MP/ME
S/S 5V
OS DISP
OS REC
V
H
BLINK
DM CS
DM SAVE
VTR POWER ON
REC AUDIO
LB+/ALWAYS 5V
AUDIO IN
AUDIO OUT
FSC
VA 5V
VA GND
AUDIO GND
CAM/LINE OUT
REC LED
SCAN OUT 0
SCAN OUT 1
SCAN IN 4
SCAN IN 5
C3716 0.022
R3729 470
R3715 CAN
C3725 1000P
C3717 0.022
C3726 1000P
R3730 470
R3714 10K
RB371 10K
R3726 10K
R3735 560
R3716 100
R3732 180
L3701 330UH
C3718 0.047
C3723 0.01
C3719 1000P
C3721 0.022
C3728 330P
C3720 3300P
R3736 10K
Q3703 2SA1622
R3622 470
C3533 100P
R3707 820
R3708 1M
X3701 5.8MHZ
C3710 33P
C3709 33P
R3705 10K
R3703 47K
C3707 1000P
R3701 10K
R3702 10K
R3731 CAN
C3705 1
C3706 1
C3708 CAN
R3704 CAN
IC371
CXA1204Q
ATF
UNREG +
R3557
RB353 100K
RB354 100K
RB356 100K
RB355 100K
R3611 12K
R3612 12K
R3613 12K
R3614 4.7K
R3615 4.7K
RF SW 1
RF SW 0
16K/48K
SEL 2
SEL 1
TSB
REC CH B2
REC CH A2
REC CH B1
REC CH A1
PB/REC
POWER SAVE
CAMERA POWER
FADE OUT
STBY
DRUM ON
LOAD
UNLOAD
S. REQ
OS REC GATE
JOG MODE
SEARCH
JOG
V. MUTE
R3616 1K
R3584 47K
IC354
NJU7201U50
V REG
ALWAYS +5V
C3530 1
C3501 1
R3552 47K
C3518 0.01
C3526 3.3/6.3
R3569 10K
Q3519 2SB815
ALWAYS +5V
LB+/ALWAYS +5V
LB+
D3502 DCG015
R3598 150
Q3520 2SK303
R3619 0
IC355 RESET
SCI7701YJA
Q3521 2SC4396
R3570 2.2M
LB+
BATTERY
B3800
1260191T00200A
CN355
FSC
VA 5V
VA GND
AUDI OUT
AUDIO GND
AUDIO IN
PB RF AUDIO
REC AUDIO
EP L
EP R
IR REMOCON
AUDIO MUTE
PB/REC
RF SW 0
CAM/LINE OUT
SP/LP
FADE
S/S GND
S/S 5V
REC LED
TO-AD1
CN359
HSJ1011-01-010
D3511 RD8.2MB2
D3513 RD8.2MB2
D3512 RD8.2MB2
D3514 RD8.2MB2
CN356
UNREG
UNREG GND
S/S GND
S/S 5V
SERIAL CONT
IR OFF
TO-SY2
CN354
TO-SY1
VTR POWER ON
DM CS
DM SAVE
REC LED
LB+/ALWAYS 5V
CG STB
MAIN RESET
CASS LOCK SW
BATT OFF
IR REMOCON
SERIAL CONT
WAKE UP
IR OFF
S/S 5V
S/S GND
MAIN CS
MAIN SO
SCK
MAIN SI
S. REQ
SCAN IN5
SCAN IN4
SCAN OUT1
SCAN OUT0
L3503 100UH
C3532
R3623 68
DCG015 D3601
R3624 100K
C3601 CAN
R3225 18
C3202 22/6.3
C3203 0.1
S/S 5V
IC323
SC14S81F
AND
OS REC DATA
OS DISP DATA
OS DISP
R3214 2.7K
Q3208 2SA1622
OS REC
R3215 2.2K
Q3209 2SA1622
R3216 2.2K
BLINK
V SYNC
GND
H SYNC
S/S 5V
TP324 GND
TP321 H SYNC
TP323 S/S 5V
R3221 1K
Q3202 2SC4396
R3202 10K
R3218 100K
R3219 100K
C3219 CAN
Q3201 2SC4211
R3207 10K
S/S 5V
R3226 2.2K
R3206 10K
AFC ADJ
TP322
COMP. SYNC
RB321 10K
R3210 10K
C3210 100P
C3211 0.1
C3209 560P
C3208 3300P
R3203 27K
R3212 1M
R3204 8.2K
R3205 2.7K
C3207 0.022
VR321 10K
C3206 1
C3221 CAN
Q3203 2SC4211
R3211 2.7K
R3201 100
L3202 33UH
C3204 30P
CT321 25P
OS POSITION ADJ
R3223 10K
R3222 10K
R3224 10K
C3224 47P
FROM SY-1
IC322
LA7519F
AFC
IC321
UPD6142G-101
CHARA. GENE
C3223 47P
C3222 47P
UNREG +
UNREG GND
S/S 5V
UNREG +
UNREG GND
S/S 5V
R3811 22K
R3381 10K
C. PWM
C3843 6800P
C3815 0.022
IC384
LA6358M
OPAMP
D. PWM
R3814 22K
C3817
C3844 6800P
10
11
12
13
14
15
16
17
18
19
20

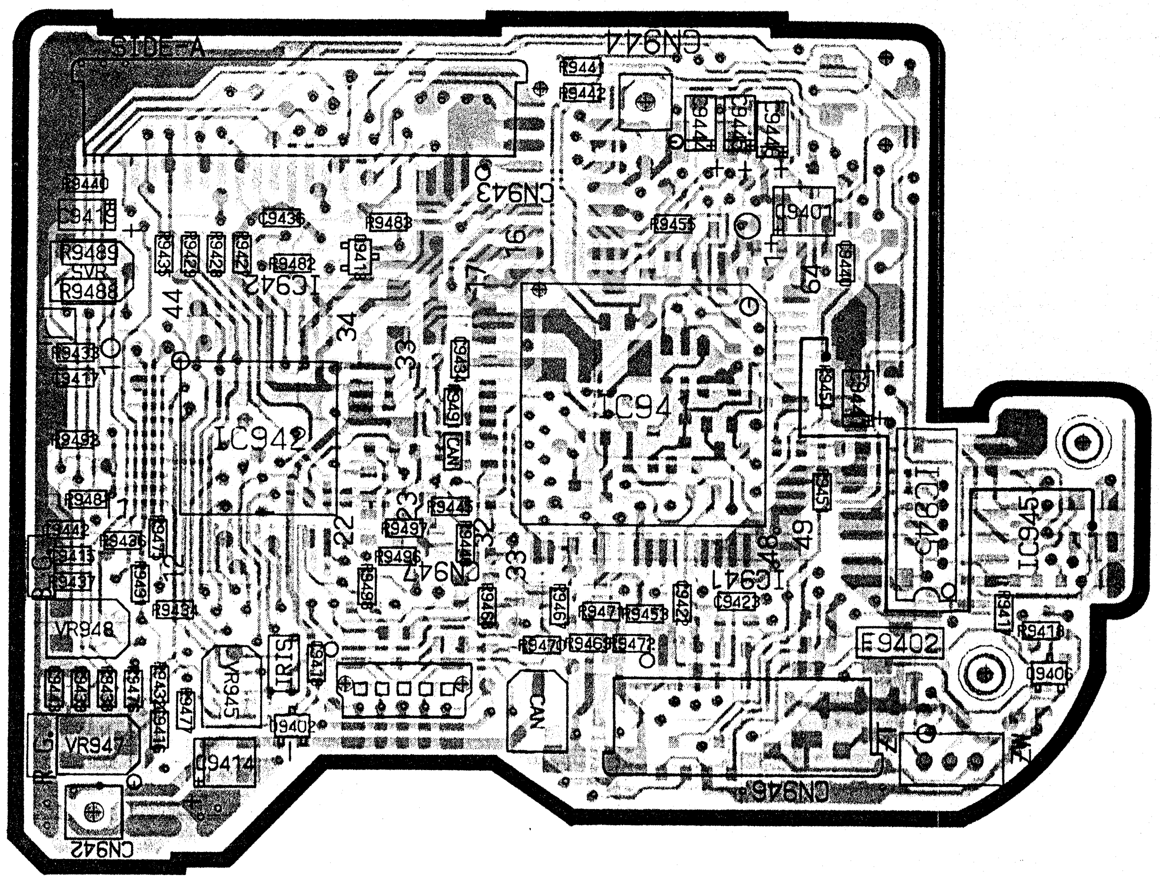

S/S 5V
T3701 0.01
C3702 0.01
C3701 22/6.3
R3738 0
R3725 4.7K
C3715 1500P
Q3701 2SC4211
R3721 3.3K
R3720 3.3K
R3718 8.2K
R3717 18K
Q3702 2SA1622
R3723 3.3K
R3724 3.3K
R3722 4.7K
C3714 22P
C3713 1000P
C3712 56P
C3711 470P
R3719 6.8K
C3724 1
R3737 0
Q3704 CAN
C3716 0.022
R3729 470
R3715 CAN
C3725 1000P
C3717 0.022
C3726 1000P
R3730 470
R3714 10K
R3726 10K
R3735 560
C3718 0.047
C3723 0.01
R3716 100
R3732 180
L3701 330UH
C3719 1000P
C3728 330P
C3720 3300P
C3721 0.022
Q3703 2SA1622
R3736 10K
RB371 10K
R37C7 820
R3708 1M
X3701 5.8MHZ
C3710 33P
C3709 33P
R3705 10K
R3703 47K
C3707 1000P
C3708 CAN
R3704 CAN
R3701 10K
R3702 10K
R3731 CAN
C3705 1
C3706 1
IC371
CXA1204Q
ATF
UNREG +
R3622 470
C3513 100P
IC354
NJU7201U50
V REG
ALWAYS +5V
C3530 1
C3501 1
R3552 47K
C3518 0.01
R3569 10K
Q3519 2SB815
LB+/ALWAYS +5V
R3598 150
Q3520 2SK303
IC355
SCI7701YJA
RESET
Q3521 2SC4396
R3619 0
R3570 2.2M
LB+
BATTERY
B3800
1260191T00200A
S/S 5V
UNREG +
L3501 100UH
Q3501 2SB1202
R3501 1K
Q3502 2SC4211
C3504 220P
R3502 1K
R3503 680
R3504 680
RB358 100K
L3502 100UH
C3510 10/16
C3511 0.1
R3557
RB353 100K
RB354 100K
RB356 100K
RB355 100K
R3611 12K
R3612 12K
R3613 12K
R3614 12K
R3615 4.7K
RB352 100K
R3617 CAN
IC351
CXP80116
RF SW 1
RF SW 0
16K/45K
SEL 2
SEL 1
TSB
REC CH B2
REC CH A2
REC CH B1
REC CH A1
PB/REC
POWER SAVE
CAMERA POWER ON
FADE OUT
STBY
DRUM ON
LOAD
UNLOAD
S.RED
OS REC GATE
JOG MODE
SEARCH
JOG
V.MUTE
CAM/LINE OUT
CFG
DFG
DPG
ATF LOCK
COMP.SYNC
LOAD TOP
LOAD END
EDIT SW
AV DD
AV REF
AV SS
NU
ATF ERROR
SWP ADJ
STILL ADJ
S REEL
T REEL
BATTERY
DEW
HB/SP
TAPE TOP
TAPE END
R3616 1K
R3584 47K
C3526 3.3/6.3
D3502 DCG015
R3594 10K
C3531 0.1
X3501 8MHZ
C3512 12P
C3513 12P
R3600 10K
UNREG +
UNREG GND
S/S 5V
C3813 10/16
C3814 0.1
RB381 10K
C. PWM
R3811 22K
R3812 22K
C3843 6800P
C3815 0.022
C3816 1000P
R3813 5.6K
IC384
LA6358M
OPAMP
R3816 5.6K
C3817 0.022
D. PWM
R3814 22K
R3815 22K
C3844 6800P
C3818 1000P
C3849 3300P
UNREG GND
R3225 18
C3202 22/6.3
C3203 0.1
S/S 5V
IC323
SC14S81F
AND
OS REC DATA
OS DISP DATA
OS DISP
R3214 2.7K
Q3208 2SA1622
OS REC
R3215 2.2K
BLINK
V SYNC
Q3209 2SA1622
R3216 2.2K
GND
H SYNC
S/S 5V
TP324 GND
TP321 H SYNC
TP323 S/S 5V
R3221 1K
Q3202 2SC4396
R3202 10K
R3218 100K
R3219 100K
C3219 CAN
Q3201 2SC4211
R3207 10K
R3226 2.2K
R3206 10K
AFC ADJ
TP322
R3210 10K
C3210 100P
C3211 0.1
C3209 560P
COMP. SYNC
RB321 10K
Q3203 2SC4211
C3221 CAN
R3211 2.7K
R3212 1M
R3203 27K
C3208 3300P
R3204 8.2K
R3205 2.7K
C3207 0.022
VR321 10K
C3206 1
R3224 10K
C3224 47P
FROM SY-1
IC322
LVA519F
AFC
R3201 100
L3202 33UH
C3204 30P
CT321 25P
OS POSITION ADJ
R3223 10K
R3222 10K
IC321
UPD6142G-101
C3223 47P
C3222 47P
CHARA. GENE
L3503 100UH
C3532 1
D3511 RD8.2MB2
D3513 RD8.2MB2
D3512 RD8.2MB2
D3514 RD8.2MB2
R3623 68
R3624 100K
DCG015 D3601
C3601 CAN
12
13
14
15
16
17
18
19
20
21
22

IT (SERVO)

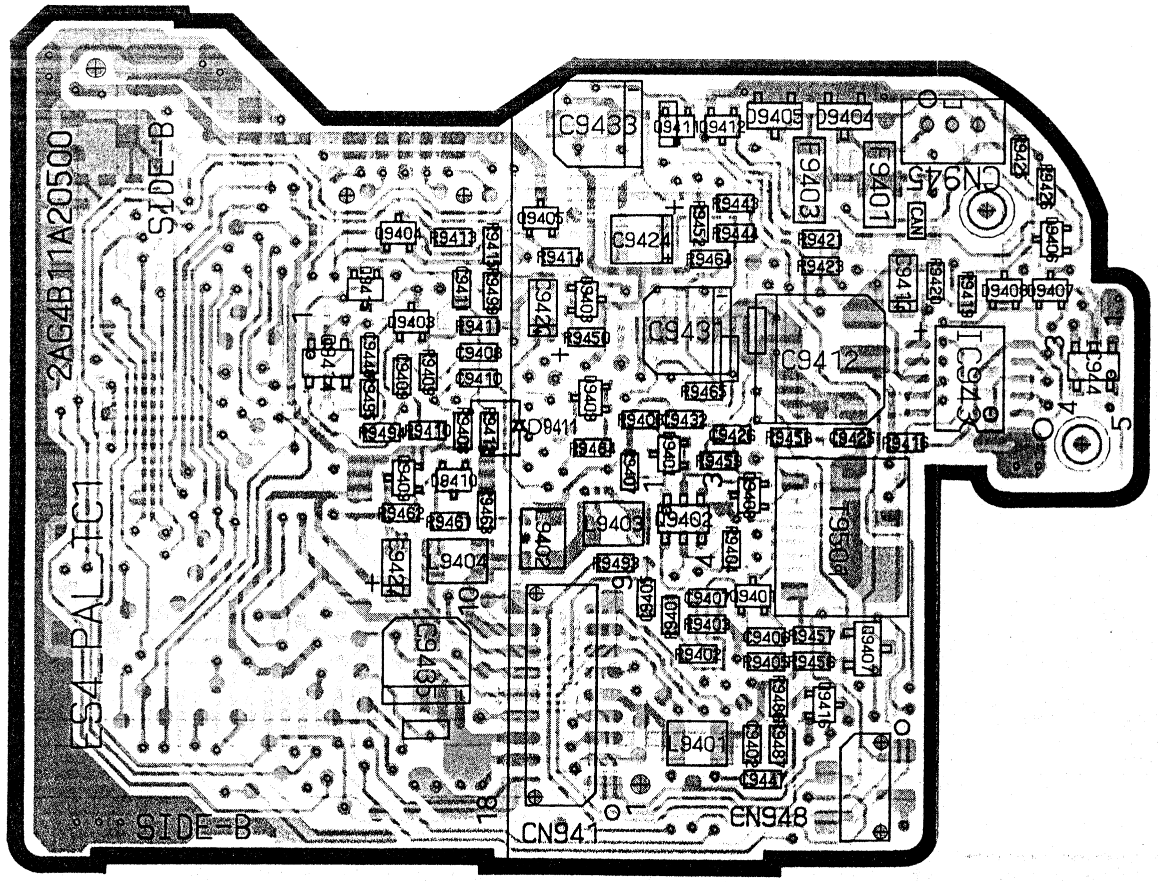

IC352
LB1638M
MOT. DRV
MOTOR POWER
5.0V
IC353
LA6358M
OPAMP
Q3501
2SB1202
Q3502
2SC4211
Q3509
FC104
TAPE END
Q3510
FC104
TAPE TOP
Q3511
FC115
CN351
DEW
LOAD -
LOAD +
LOAD END SW
LOAD TOP SW
S/S GND
CASSET LOCK SW
UNREG GND
REEL S
REEL T
S/S 5V
TAPE END
TAPE TOP
REC PROOF
REEL LED
ME/MP
T/E LED
TO-MECHA
EDIT SW
S3501
SSSS2.1-2VERTICAL
IC383
CX20115A
SENS. AMP
C FG
D FG
D PG
SWP ADJ
STILL ADJ
BATTERY ADJ
VR352
VR351
Q3505
FMC2
CN352
S/S GND
D COMON
D PG
D FG
TO-DRUM
CN353
S/S 5V
CFG 1
S/S GND
CFG 2
CVHE +
CUHE +
CVE +
CUHE -
CVHE -
CWHE -
CVE -
CWHE +
CAP V
CAP W
CAP U
TO-CAPSTAN
IC381
LB1617M
CAPSTAN DRV
UNREG GND
S/S 5V
UNREG +
Q3801
FMC2
Q3803
2SC4211
Q3804
2SB1121
L3804
47UH
D3801
SB05-05CP
C. VS
PROTECT
OSC
PWM f
TP381
PWM F
IC385
MB3775
PWM CNT
SHIELD PLATE X2
PWM f ADJ
VR381
Q3807
2SC4211
Q3808
2SB1121
L3806
47UH
D3802
SB05-05CP
D. VS
IC382
LB1617M
DRUM DRV
CN358
DRUM W
DVHE +
DUHE +
DVE -
DUHE -
DVHE -
DWHE -
DVE +
DWHE +
DRUM V
DRUM U
TO-DRUM
22
23
24
25
26
27
28
29
30
31

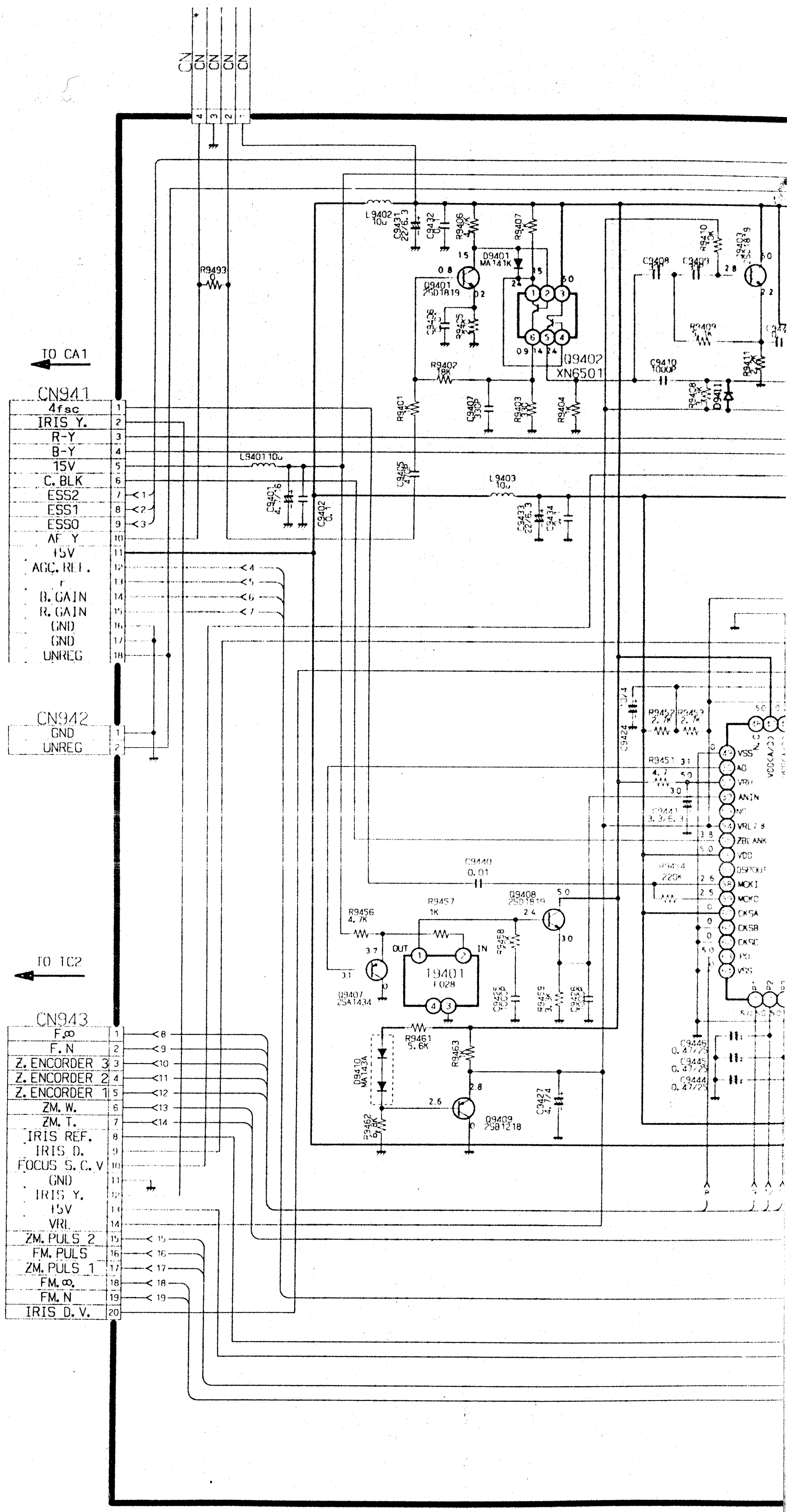
*a: REC MODE (b): PB MODE

TC-1 BOARD SIDE A

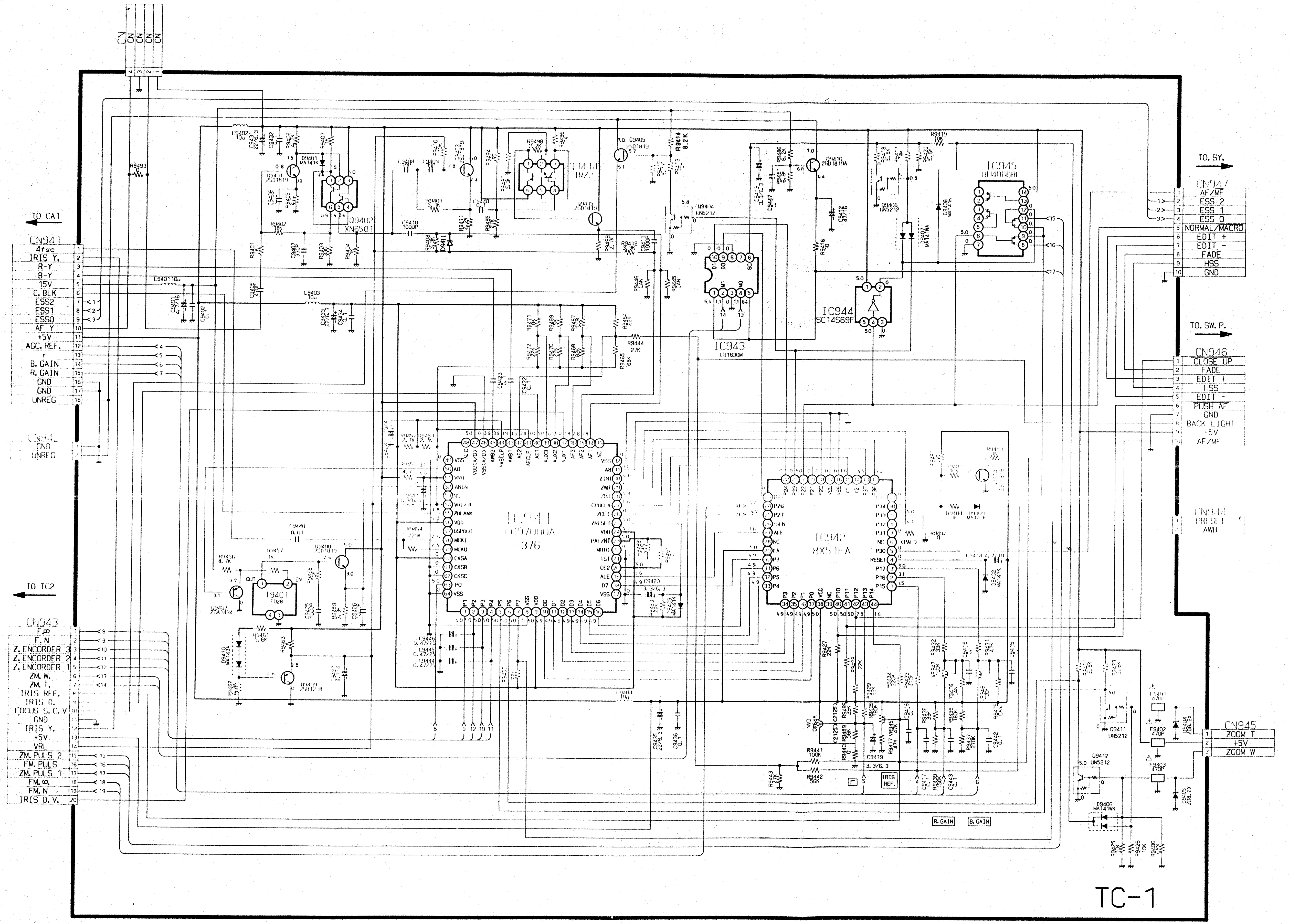

SIDE-A
CN944
CN943
IC942
IC941
IC945
VR948
VR945
VR947
CN942
CN946
E9402
IRIS

TC-1 BOARD SIDE B


SIDE-B
2AG4B11A20500
ES4-PAL TC-1
IC9433
IC9431
IC9412
IC943
CN945
CN941
CN948
L9401


TO CA1
CN941
1 4fsc
2 IRIS Y.
3 R-Y
4 B-Y
5 15V
6 C. BLK
7 ESS2
8 ESS1
9 ESS0
10 AF Y
11 15V
12 AGC. REF.
13 r
14 B. GAIN
15 R. GAIN
16 GND
17 GND
18 UNREG
CN942
1 GND
2 UNREG
TO TC2
CN943
1 F.∞
2 F. N
3 Z. ENCORDER 3
4 Z. ENCORDER 2
5 Z. ENCORDER 1
6 ZM. W.
7 ZM. T.
8 IRIS REF.
9 IRIS D.
10 FOCUS S. C. V
11 GND
12 IRIS Y.
13 15V
14 VRL
15 ZM. PULS 2
16 FM. PULS
17 ZM. PULS 1
18 FM. ∞.
19 FM. N
20 IRIS D. V.
R9493
Q9401
Q9402 XN6501
D9401 MA141K
Q9408
Q9409 2SB1218
T9401
L9403
C9440 0.01
K
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

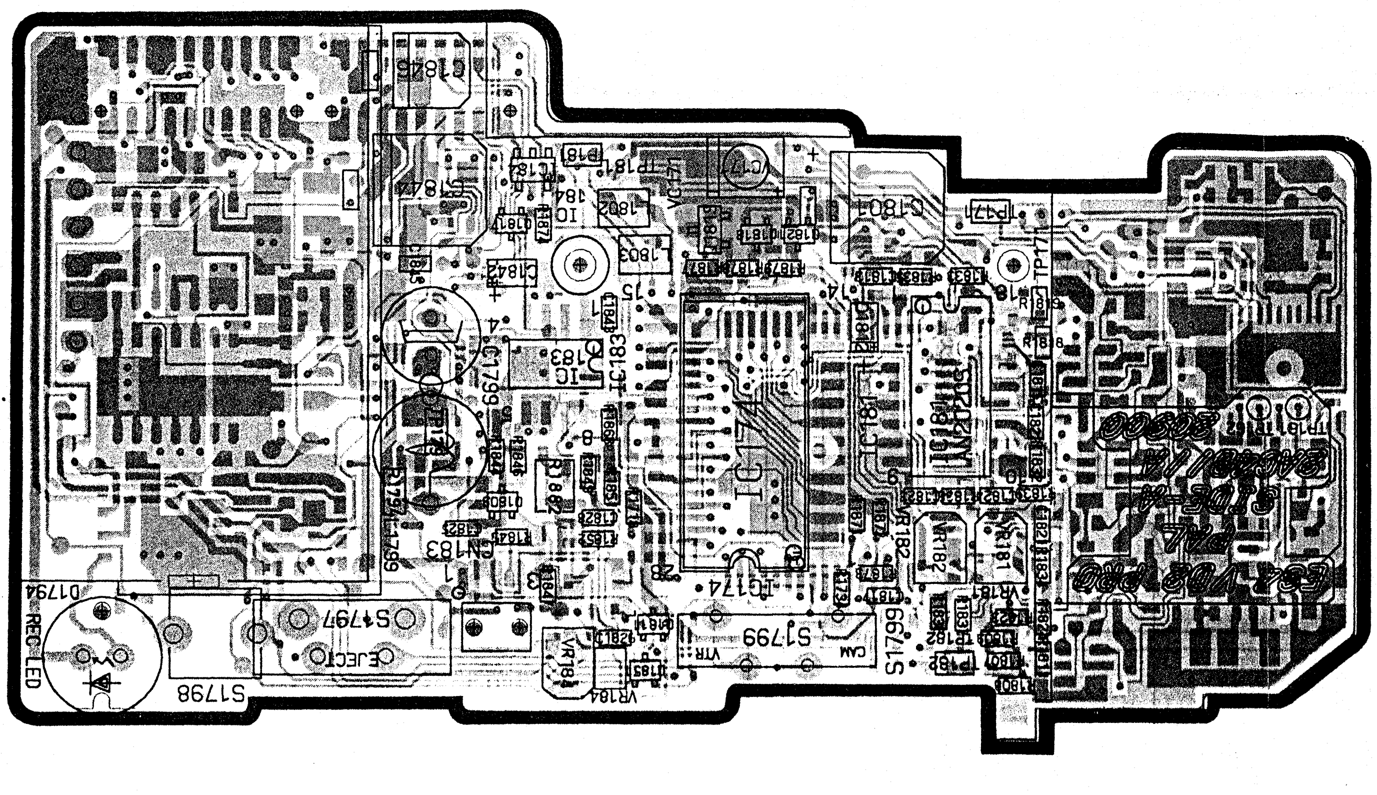
TC-1 CIRCUIT


TO CA1
CN941
4fsc
IRIS Y.
R-Y
B-Y
15V
C. BLK
ESS2
ESS1
ESS0
AF Y
+5V
AGC. REF.
r
B. GAIN
R. GAIN
GND
GND
UNREG
CN942
GND
UNREG
TO TC2
CN943
F∞
F. N
Z. ENCORDER 3
Z. ENCORDER 2
Z. ENCORDER 1
ZM. W.
ZM. T.
IRIS REF.
IRIS D.
FOCUS S. C. V
GND
IRIS Y.
+5V
VRL
ZM. PULS 2
FM. PULS
ZM. PULS 1
FM. ∞
FM. N
IRIS D. V.
TO. SY.
CN947
AF/MF
ESS 2
ESS 1
ESS 0
NORMAL/MACRO
EDIT +
EDIT -
FADE
HSS
GND
TO. SW. P.
CN946
CLOSE UP
FADE
EDIT +
HSS
EDIT -
PUSH AF
GND
BACK LIGHT
+5V
AF/MF
CN944
PRESET
AWB
CN945
ZOOM T
+5V
ZOOM W
IC941
IC942
IC943
LB1830M
IC944
SC14569F
IC945
BU4066BF
Q9401
2SD1819
Q9402
XN6501
Q9405
2SD1819
Q9414
IMZ1
Q9416
2SD1819A
Q9404
UN5212
Q9406
UN5212
Q9407
2SA1444
Q9408
2SD1819
Q9411
UN5212
Q9412
UN5212
Q9421
2SA1218
T9401
R9414
8.2K
R9444
27K
R9441
100K
R9442
56K
R9456
4.7K
L9401 10u
L9402
L9403
10u
C9440
0.01
C9419
3.3/6.3
C9420
3.3/6.3
F9402
470P
F9403
470P
D9406
MA141WK
R. GAIN
B. GAIN
IRIS REF.
TC-1

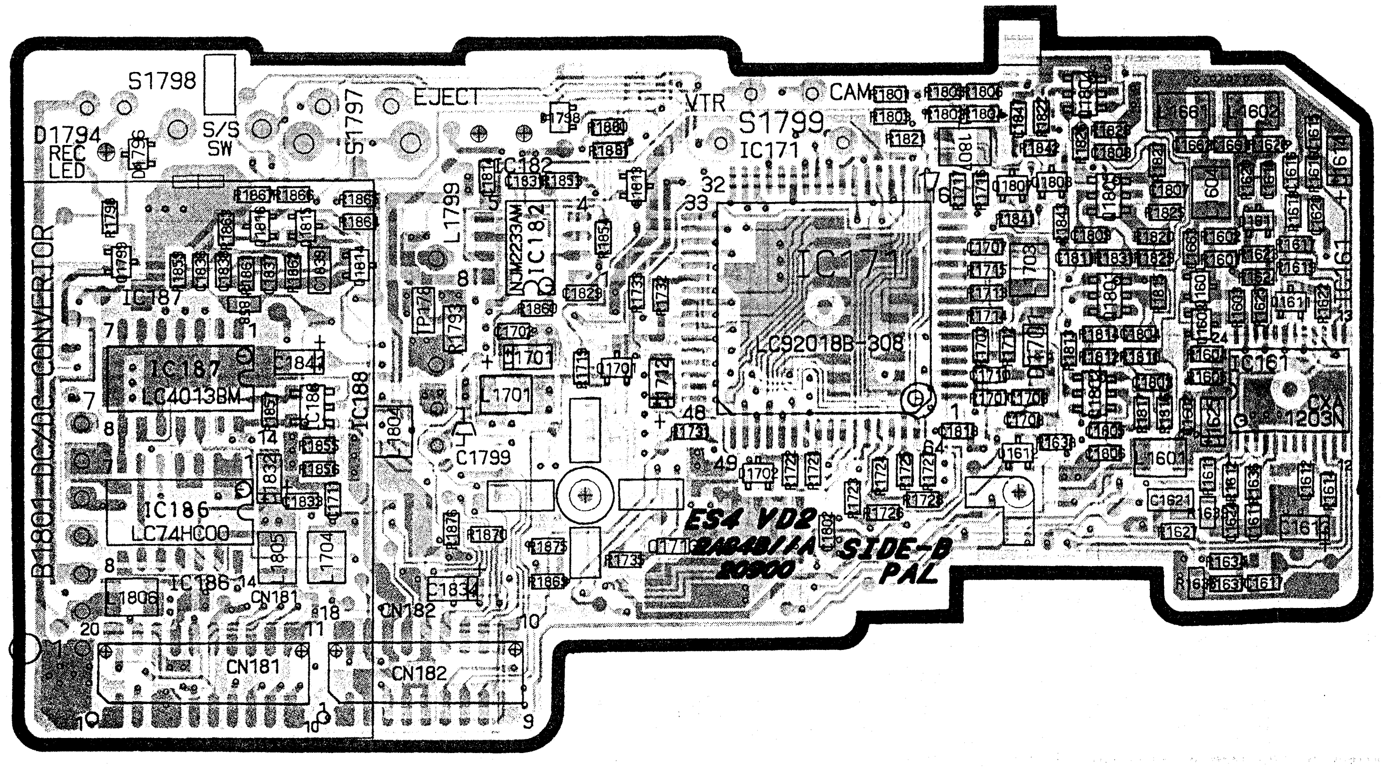
*a: REC MODE

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

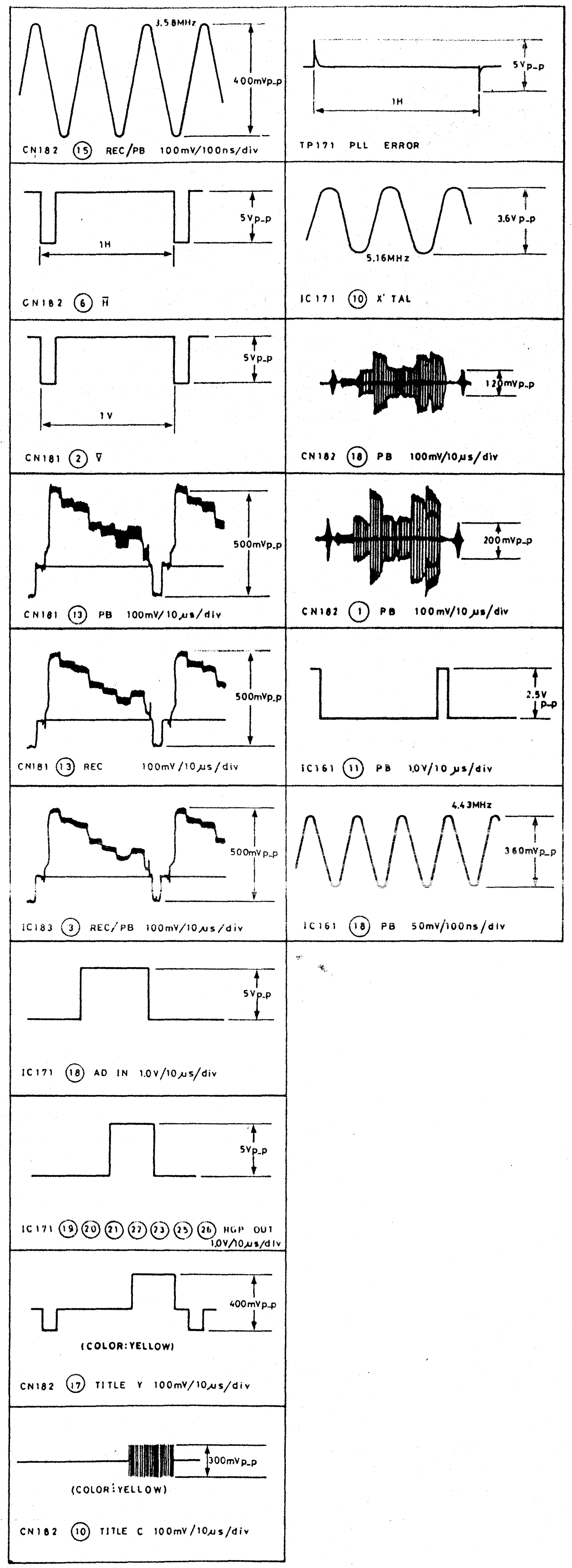
VD-2 BOARD SIDE A

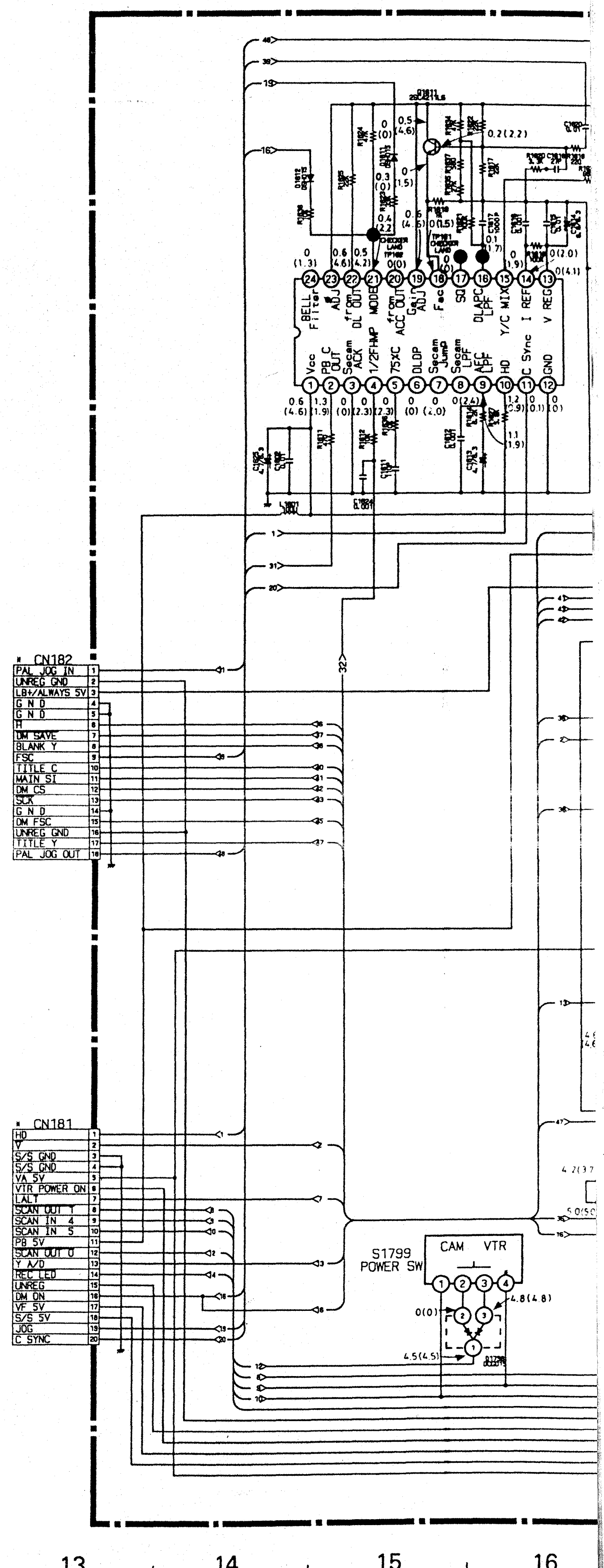

S1798
EJECT
S1797
S1799
VTR
CAM
REC LED
D1794
IC183
IC171
CN183
TP171

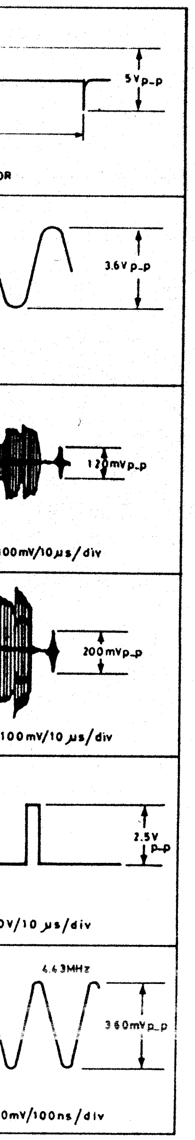
VD-2 BOARD SIDE B


S1798
S/S SW
D1794
REC LED
S1797
EJECT
VTR
S1799
CAM
IC171
IC182
NJM2233AM
LC92018B-308
IC187
LC40138M
IC188
IC186
LC74HC00
IC161
CXA1203N
CN181
CN182
DC/DC CONVERTER
ES4 VD2
SIDE-B
PAL

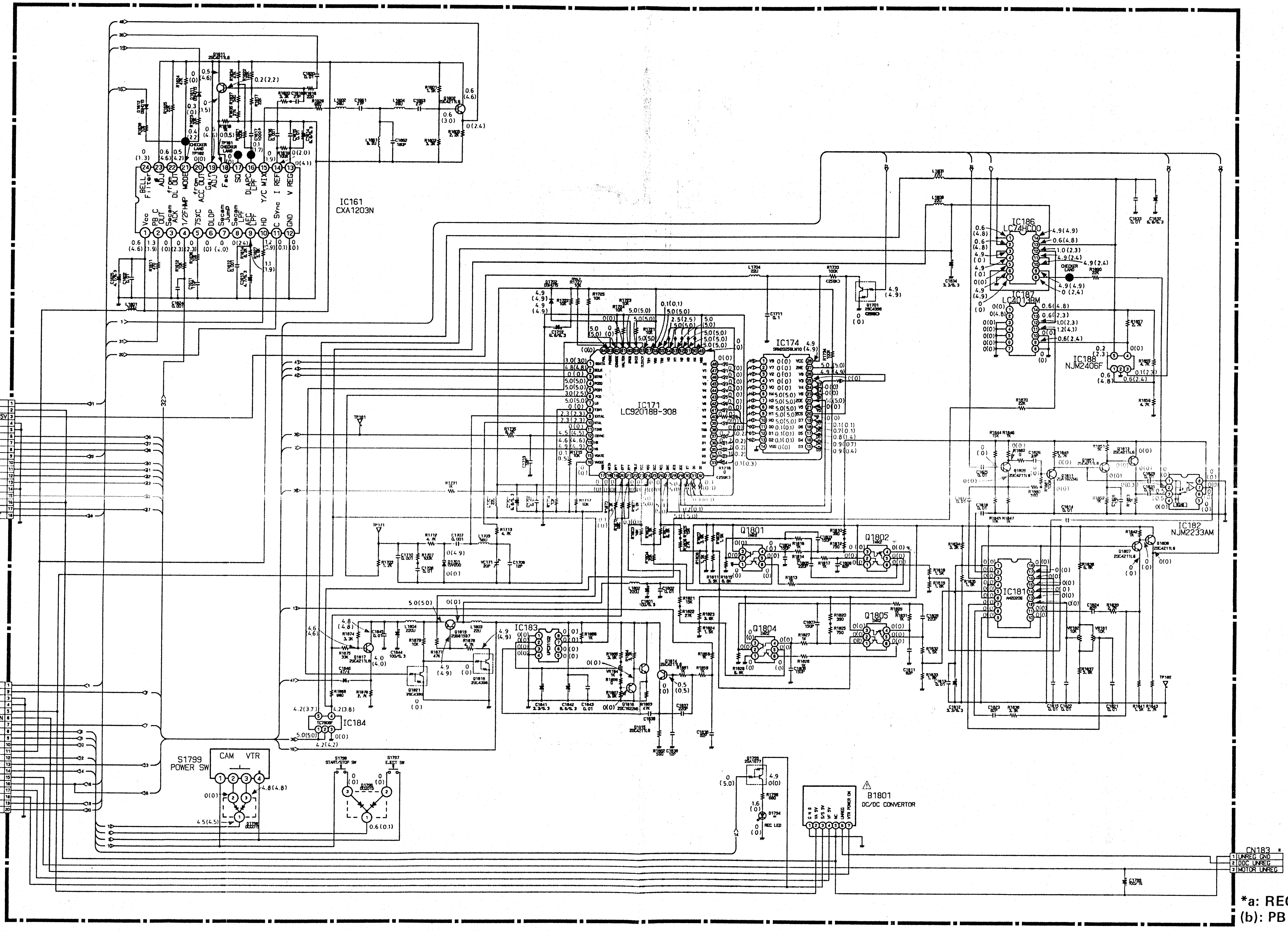
VD-2 BOARD




CN182
PAL JOG IN
UNREG GND
LB+/ALWAYS 5V
GND
GND
H
DM SAVE
BLANK Y
FSC
TITLE C
MAIN SI
DM CS
SCK
GND
DM FSC
UNREG GND
TITLE Y
PAL JOG OUT
CN181
HD
Y
S/S GND
S/S GND
VA 5V
VTR POWER ON
LALT
SCAN OUT 1
SCAN IN 4
SCAN IN 5
PB 5V
SCAN OUT 0
Y A/D
REC LED
UNREG
DM ON
VF 5V
S/S 5V
JOG
C SYNC
S1799 POWER SW
CAM
VTR
BELL Filter
Vcc
PB C OUT
Secam ACK
DL OUT
1/2FHMP
MODE
75XC
ACC OUT
DLDP
Secam ADJ
Fsc
Secam LPF
SQ
DLAPC
AFC
LPF
HD
Y/C MIX
C Sync
I REF
GND
V REG



VD-2 CIRCUIT

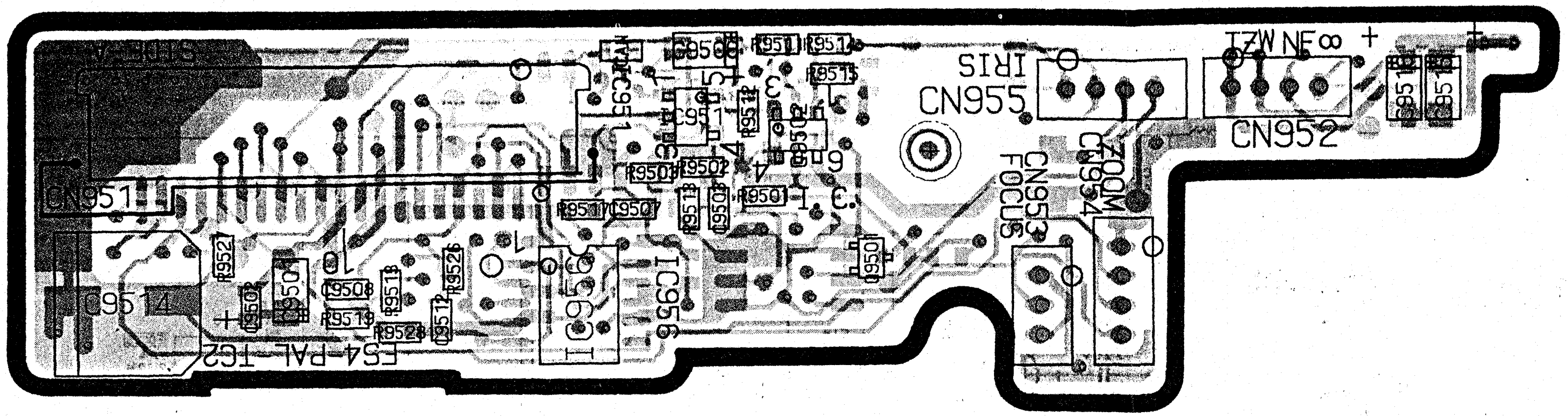


IC161 CXA1203N
BELL Filter
ADJ
DL OUT
MODE
from ACC OUT
ADJ
Fsc
SQ
DLAPC LPF
Y/C MIX
I REF
V REG
Vcc
PB C OUT
Secam ACK
1/2FHMP
75X C
DLDP
Secam Jump
Secam LPF
HD
C Sync
GND
CHECKER LAND
IC171 LC920188-308
IC174
IC186 LC74HC00
IC187 LC4013BM
IC188 NJM2406F
IC182 NJM2233AM
IC181
IC183
IC184
Q1801
Q1802
Q1804
Q1805
TP161
TP171
TP182
CN182
PAL JOG IN
UNREG GND
LB+/ALWAYS 5V
G N D
G N D
H
DM SAVE
BLANK Y
FSC
TITLE C
MAIN SI
DM CS
SCK
G N D
DM FSC
UNREG GND
TITLE Y
PAL JOG OUT
CN181
HD
V
S/S GND
S/S GND
VA 5V
VTR POWER ON
LALT
SCAN OUT T
SCAN IN 4
SCAN IN 5
PB 5V
SCAN OUT 0
Y A/D
REC LED
UNREG
DM ON
VF 5V
S/S 5V
JOG
C SYNC
S1799 POWER SW
CAM
VTR
S1796 START/STOP SW
S1797 EJECT SW
D1794 REC LED
B1801 DC/DC CONVERTOR
CN183
UNREG GND
DDC UNREG
MOTOR UNREG

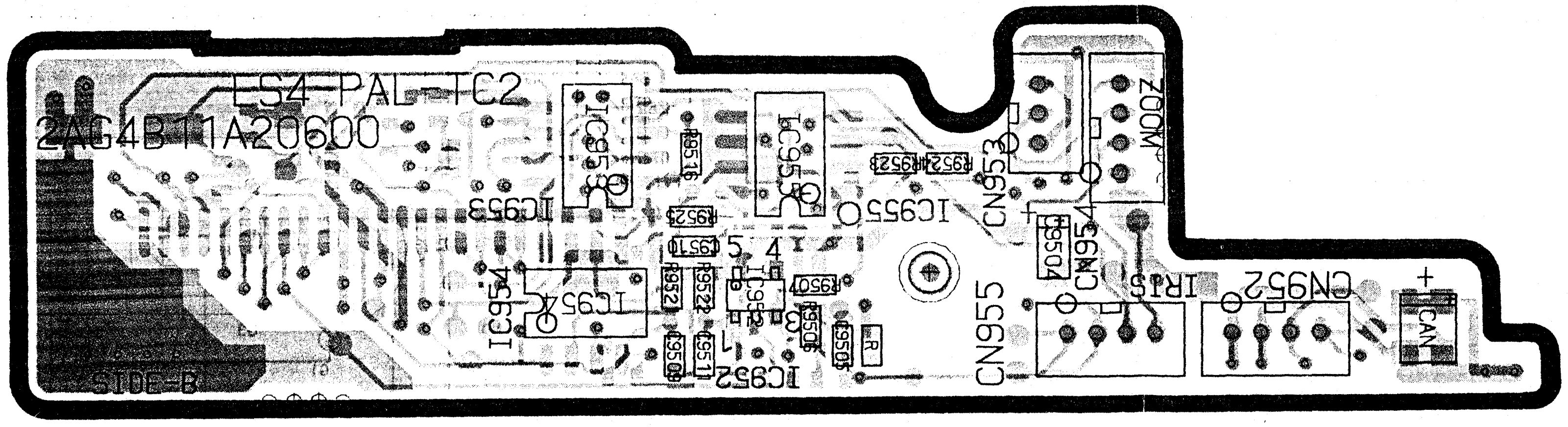
*a: REC MODE
(b): PB MODE

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

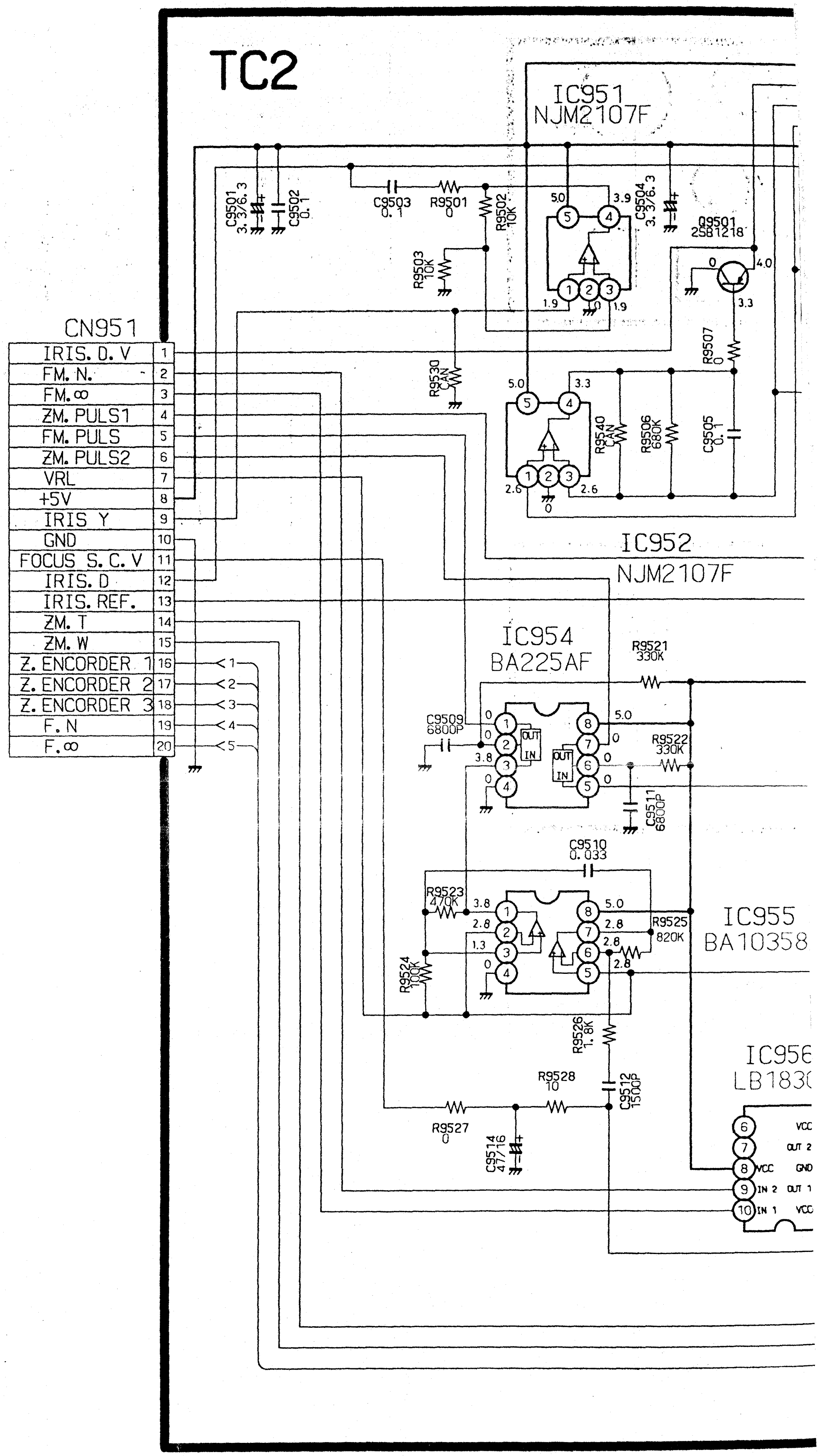
TC-2 BOARD SIDE A


CN951
IRIS
CN955
IZW NF∞ +
CN952
CN953
FOCUS
ZOOM
CN954
C9514
ES4-PAL-TC2
IC956
IC951
R9501
R9502
R9503
R9504
R9507
R9508
R9511
R9512
R9513
R9514
R9518
R9519
R9526
R9527
C9501
C9502
C9507

TC-2 BOARD SIDE B


ES4-PAL-TC2
2AG4B11A20600
IC953
IC955
IC954
IC952
CN953
ZOOM
CN954
CN955
IRIS
CN952
CAN
SIDE-B
R9516
R9521
R9523
R9524
R9522
R9510
C9511
C9512
C9513
C9506
R9504
R9505
R9509

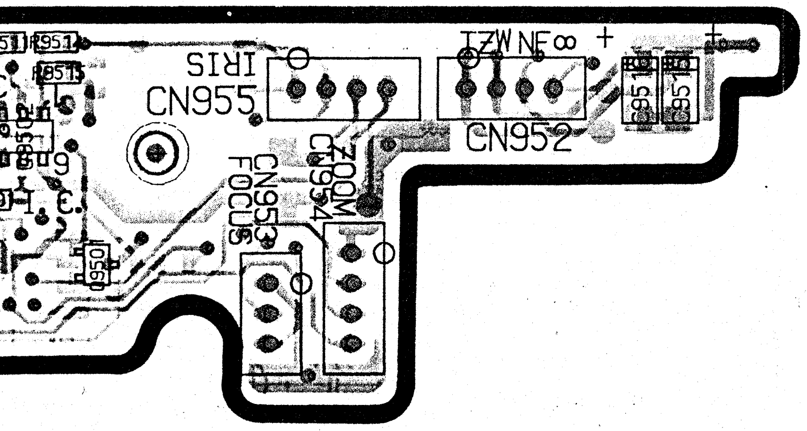
TC-2 CIRC


TC2
IC951
NJM2107F
IC952
NJM2107F
IC954
BA225AF
IC955
BA10358
IC956
LB183
CN951
1 IRIS. D. V
2 FM. N.
3 FM. ∞
4 ZM. PULS1
5 FM. PULS
6 ZM. PULS2
7 VRL
8 +5V
9 IRIS Y
10 GND
11 FOCUS S. C. V
12 IRIS. D
13 IRIS. REF.
14 ZM. T
15 ZM. W
16 Z. ENCORDER 1
17 Z. ENCORDER 2
18 Z. ENCORDER 3
19 F. N
20 F. ∞
C9501 3.3/6.3
C9502 0.1
C9503 0.1
R9501 0
R9502 10K
R9503 10K
C9504 3.3/6.3
Q9501 2SB1218
R9507 0
R9530 CAN
R9540 CAN
R9506 680K
C9505 0.1
R9521 330K
C9509 6800P
R9522 330K
C9511 6800P
C9510 0.033
R9523 470K
R9525 820K
R9524 100K
R9526 1.8K
R9528 10
R9527 0
C9512 1500P
C9514 4.7/16
VCC
OUT 2
GND
IN 2
OUT 1
IN 1

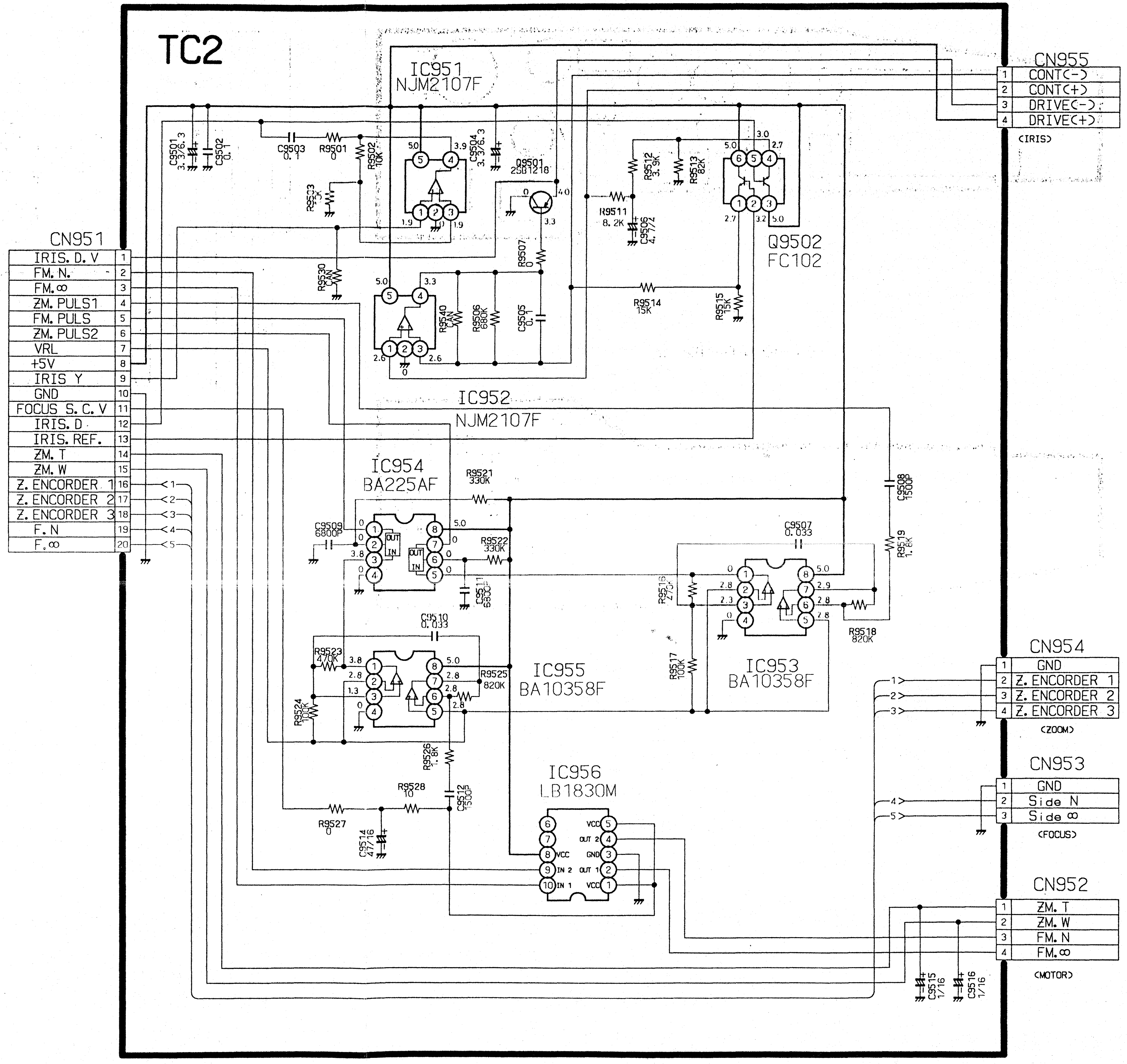
K J I H G F E D C B A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

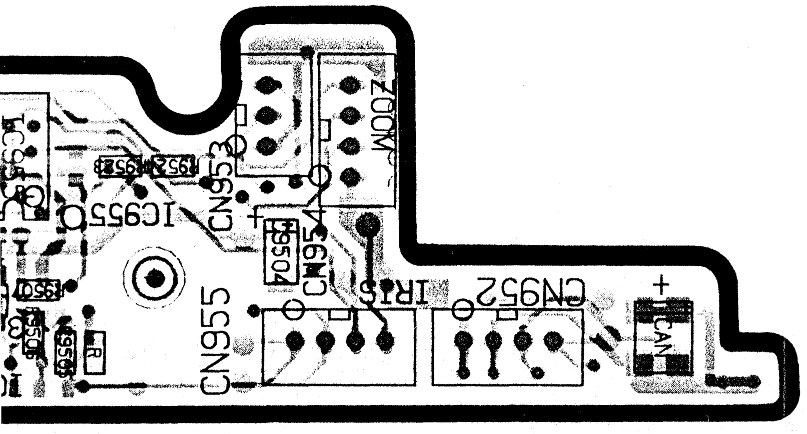
RD SIDE A


IRIS
CN955
CN952
I Z W N F ∞ +
ZOOM
CN954
CN953
FOCUS
R951
R951
R952
C951
C951

TC-2 CIRCUIT


TC2
IC951
NJM2107F
IC952
NJM2107F
IC954
BA225AF
IC955
BA10358F
IC953
BA10358F
IC956
LB1830M
Q9501
2SB1218
Q9502
FC102
C9501 3.3/6.3
C9502 0.1
C9503 0.1
R9501 0
R9502 10K
R9533 1.5K
C9504 3.3/6.3
R9511 8.2K
C9506 4.7/2
R9512 3.9K
R9513 82K
R9507 0
R9530 CAN
R9540 CAN
R9506 680K
C9505 0.1
R9514 15K
R9515 15K
R9521 330K
C9509 6800P
R9522 330K
C9511 6800P
C9510 0.033
R9523 470K
R9524 100K
R9525 820K
R9526 1.8K
R9528 10
R9527 0
C9514 47/16
C9512 1500P
C9508 1500P
R9519 1.8K
C9507 0.033
R9516 270K
R9518 820K
R9517 100K
C9515 1/16
C9516 1/16
CN951
1 IRIS. D. V
2 FM. N.
3 FM. ∞
4 ZM. PULS1
5 FM. PULS
6 ZM. PULS2
7 VRL
8 +5V
9 IRIS Y
10 GND
11 FOCUS S. C. V
12 IRIS. D
13 IRIS. REF.
14 ZM. T
15 ZM. W
16 Z. ENCORDER 1
17 Z. ENCORDER 2
18 Z. ENCORDER 3
19 F. N
20 F. ∞
CN955
1 CONT(-)
2 CONT(+)
3 DRIVE(-)
4 DRIVE(+)
(IRIS)
CN954
1 GND
2 Z. ENCORDER 1
3 Z. ENCORDER 2
4 Z. ENCORDER 3
(ZOOM)
CN953
1 GND
2 Side N
3 Side ∞
(FOCUS)
CN952
1 ZM. T
2 ZM. W
3 FM. N
4 FM. ∞
(MOTOR)
VCC
OUT 2
GND
OUT 1
IN 2
IN 1
OUT
IN
K

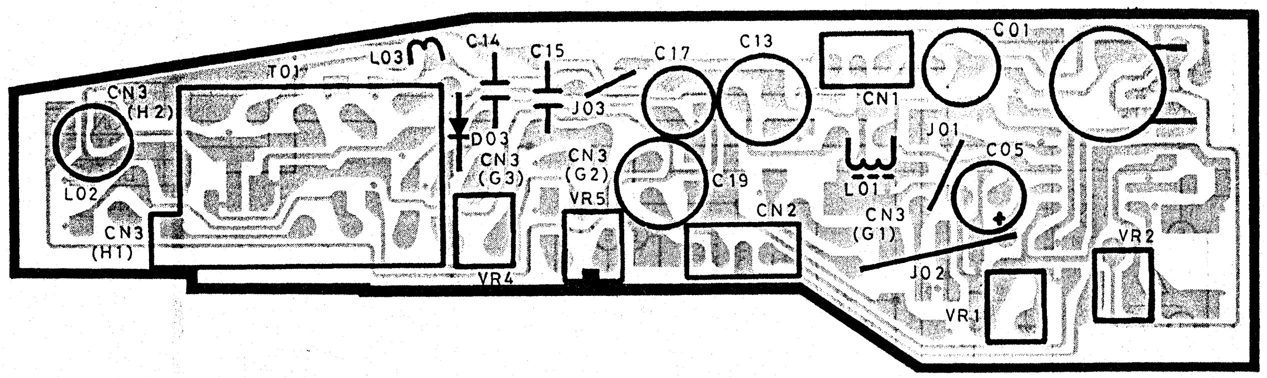
RD SIDE B


ZOOM
CN953
IC955
CN954
R954
CN955
IRIS
CN952
CAN
R
+

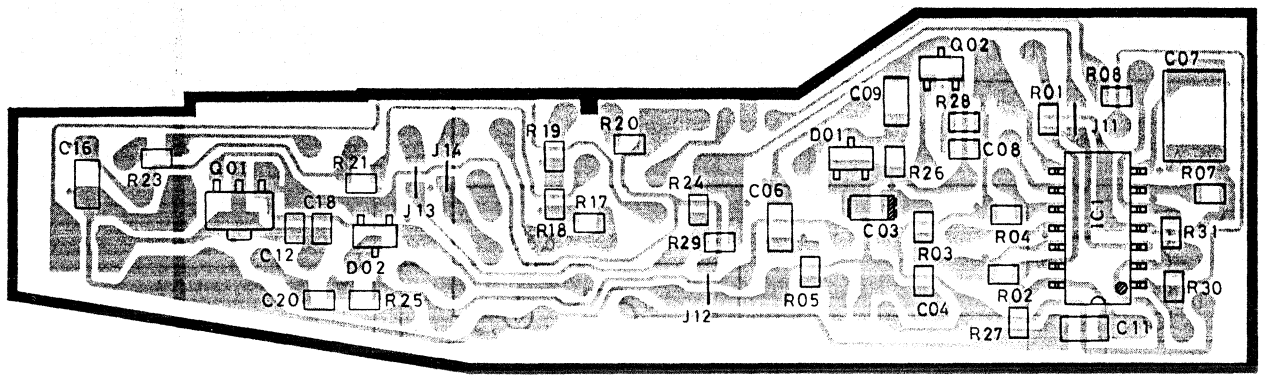
*a: REC MODE

6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

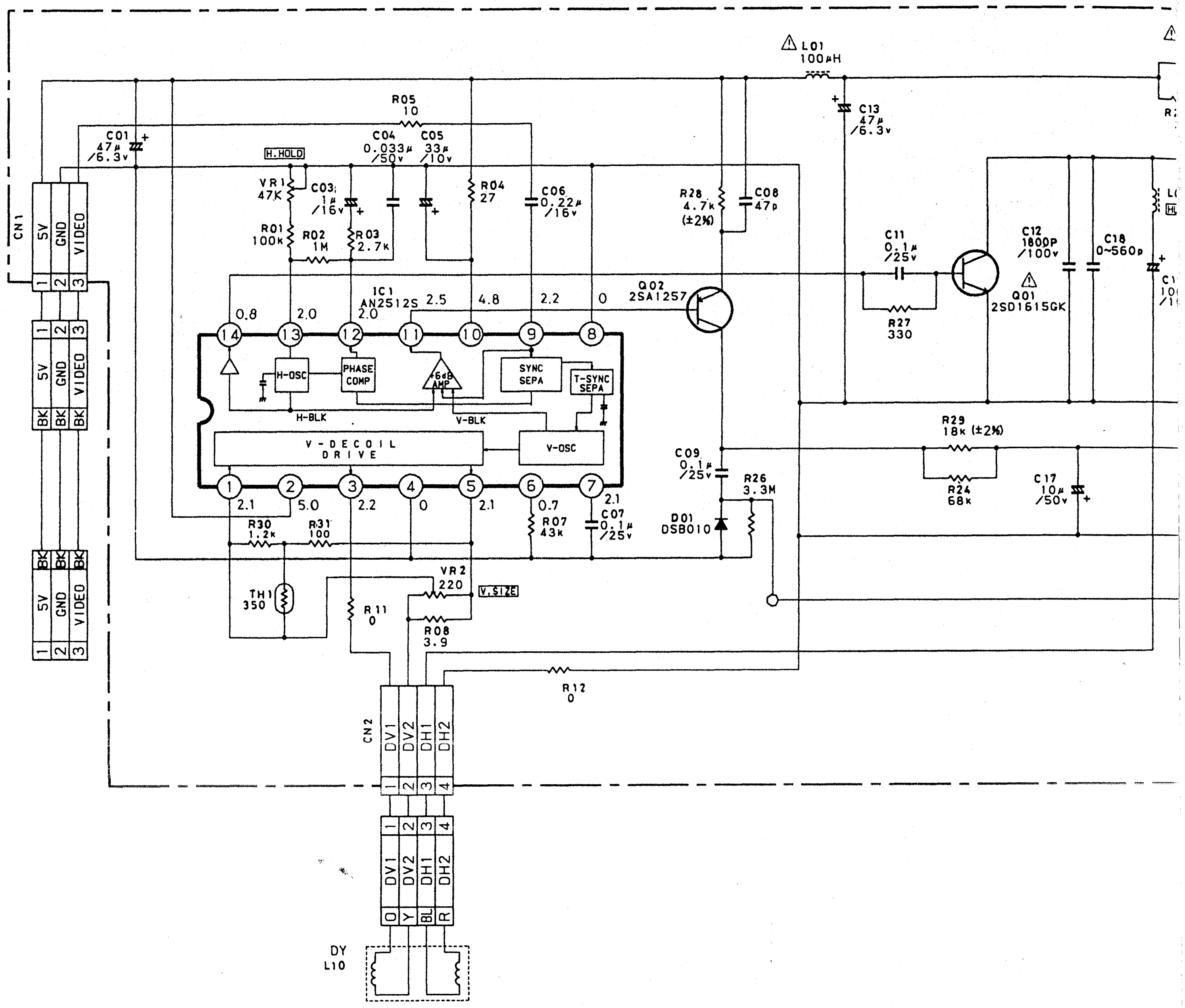
VF-1 BOARD SIDE A


CN3 (H2)
T01
L03
C14
C15
C17
C13
C01
D03
J03
CN3 (G3)
CN3 (G2)
CN1
J01
C05
L02
CN3 (H1)
VR4
VR5
C19
CN2
L01
CN3 (G1)
J02
VR1
VR2

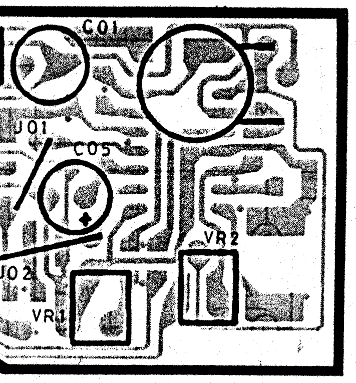
VF-1 BOARD SIDE B


Q02
C07
C09
R28
R01
R08
J11
C16
R19
R20
D01
C08
R23
Q01
R21
J14
R17
R24
C06
R26
R07
C18
J13
R18
R29
C03
R04
R31
C12
D02
R03
IC
C20
R25
R05
C04
R02
R30
J12
R27
C11

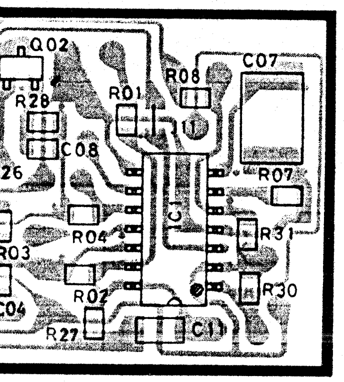
VF-1 CIRCUIT


CN1
5V
GND
VIDEO
BK
C01 47μ /6.3v
R05 10
C04 0.033μ /50v
C05 33μ /10v
H.HOLD
VR1 47K
C03 1μ /16v
R04 27
C06 0.22μ /16v
R01 100k
R02 1M
R03 2.7k
R28 4.7k (±2%)
C08 47p
IC1 AN2512S
Q02 2SA1257
H-OSC
PHASE COMP
6dB AMP
SYNC SEPA
T-SYNC SEPA
H-BLK
V-BLK
V-DECOIL DRIVE
V-OSC
0.8
2.0
2.0
2.5
4.8
2.2
0
2.1
5.0
2.2
0
2.1
0.7
2.1
R30 1.2k
R31 100
R07 43k
C07 0.1μ /25v
C09 0.1μ /25v
D01 DSB010
R26 3.3M
TH1 350
VR2 220
V.SIZE
R11 0
R08 3.9
R12 0
CN2
DV1
DV2
DH1
DH2
O
Y
BL
R
DY L10
L01 100μH
C13 47μ /6.3v
C11 0.1μ /25v
R27 330
Q01 2SD1615GK
C12 1800P /100v
C18 0~560p
R29 18k (±2%)
R24 68k
C17 10μ /50v

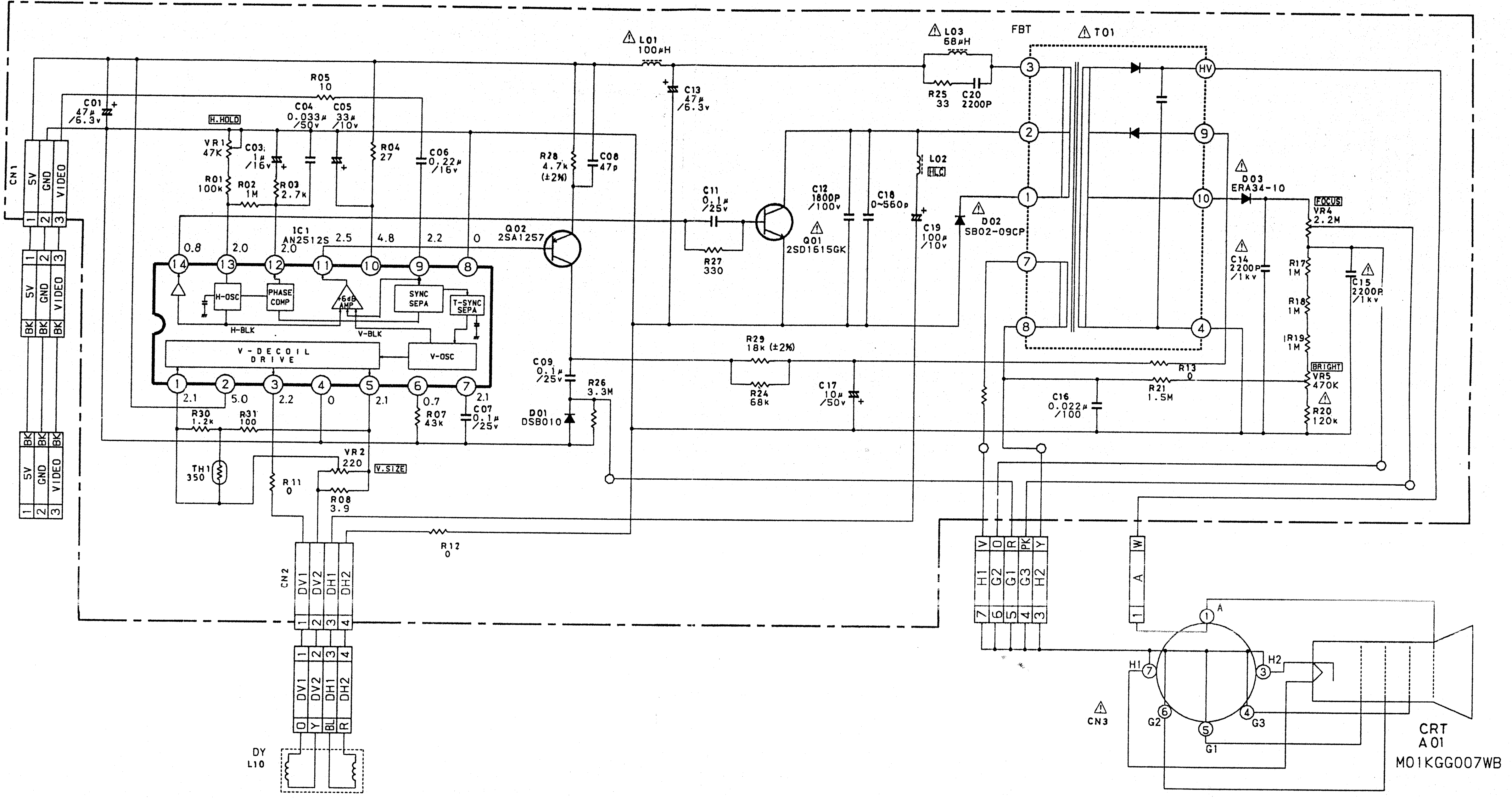
VF-1 CIRCUIT



C01
Q01
C05
VR2
Q02
VR1



Q02
C07
R28
R01
R06
C08
R07
R04
R31
R03
R02
R30
C04
R27
C1



CN1
5V
GND
VIDEO
BK
C01 47µ /6.3v
R05 10
H.HOLD
VR1 47K
C03 1µ /16v
C04 0.033µ /50v
C05 33µ /10v
R04 27
C06 0.22µ /16v
R01 100k
R02 1M
R03 2.7k
IC1 AN2512S
H-OSC
PHASE COMP
6dB AMP
SYNC SEPA
T-SYNC SEPA
H-BLK
V-BLK
V-DECOIL DRIVE
V-OSC
R28 4.7k (±2%)
C08 47p
Q02 2SA1257
C09 0.1µ /25v
R26 3.3M
D01 DSB010
R07 43k
C07 0.1µ /25v
R30 1.2k
R31 100
TH1 350
R11 0
VR2 220
V.SIZE
R08 3.9
R12 0
CN2
DV1
DV2
DH1
DH2
O
Y
BL
R
DY L10
L01 100µH
C13 47µ /6.3v
C11 0.1µ /25v
R27 330
Q01 2SD1615GK
C12 1800P /100v
C18 0~560p
L02 HLC
C19 100µ /10v
D02 SB02-09CP
R29 18k (±2%)
R24 68k
C17 10µ /50v
L03 68µH
R25 33
C20 2200P
FBT
T01
HV
D03 ERA34-10
FOCUS
VR4 2.2M
C14 2200P /1kv
C15 2200P /1kv
R17 1M
R18 1M
R19 1M
BRIGHT
VR5 470K
R20 120k
R13 0
R21 1.5M
C16 0.022µ /100
H1
G2
G1
G3
H2
V
O
R
PK
Y
W
A
CN3
CRT A01 M01KGG007WB

*a: REC MODE

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22